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**A Contribution to the Later Prehistoric and Early
Medieval
(400 BC - AD 650) Settlement Record of Galloway**

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PhD by Research Publication, University of Edinburgh,
2018

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Declaration

I declare that this thesis is the result of my own work and has not, whether in the same or a different form, been presented to this or any other university in support of an application for any other degree than that for which I am now a candidate. Except where it is stated otherwise by reference or acknowledgment, the work presented is entirely my own.

Date: 30 November 2018 Signature:

A handwritten signature in blue ink, appearing to read 'Razay' followed by a stylized flourish.

Abstract

This critical review concerns a sequence of two archaeological excavations and a regional synthesis undertaken between 2003 and 2012 and subsequently published between 2007 and 2016. The various projects were focussed upon Galloway and were primarily concerned with settlement patterns between 400 BC and AD 650. The published work proposed for consideration comprises a monograph and three articles (Appendices B-E).

Initial examination of the background to previous research into the later prehistoric and early medieval settlement record of Galloway, provided in Chapters 2 and 3, outlines the basis for the author's research. The archaeological evidence recovered from the writer's excavation of Carghidown Promontory Fort and Trusty's Hill Fort is discussed in Chapters 4 and 5 respectively, revealing aspects of the later prehistoric and early medieval settlement pattern in Galloway within a local, regional and national context.

This is followed, in Chapter 6, by an exploration of the classification, morphology and chronology of the later prehistoric and early medieval settlement record in Galloway, building on the results of the author's previous work and examining the ephemeral basis for many site classifications and the distinctions made between sites in Galloway and other regions of southern Scotland. The concluding chapter (7) examines through regional, national, international and chronological perspectives how the archaeology of later prehistoric and early medieval Galloway is embedded within core underlying patterns of settlement and culture in Scotland between 400 BC and AD 650. This final chapter also draws out contrasts during this period between settlement and culture in Scotland and that of neighbouring countries.

Lay Summary

Galloway is often viewed as somewhat peripheral to understanding Iron Age and early medieval Scotland. However, Galloway has never received as much sustained study of this period as in recent years. The author has contributed to this research through investigating settlement patterns in the region between 400 BC and AD 650.

Following an initial survey along the Galloway coast, the excavation of Carghidown promontory fort was undertaken in 2003-2004. The results exposed aspects of the Iron Age settlement pattern, notably the deliberate planning that lay behind the choice of location, the nature of its occupation and of its abandonment too at some point during the later centuries BC or early first century AD.

This work was followed by the excavation and survey of Trusty's Hill, one of several small oval forts in Galloway. This hillfort is unique in the region for its Pictish carvings, which are far to the south of where Pictish symbols are predominantly found. The new dating evidence, artefact assemblage and the nucleated layout of this fort, including particularly the precise location of the Pictish carvings, was compared to other sites elsewhere in Scotland. The result is that Trusty's Hill matches the archaeological characteristics of a royal site of this era (sixth-seventh centuries AD) in Scotland.

Thereafter, examination of a range of Iron Age settlement types in Galloway assessed whether the archaeology of this region was meaningfully distinct from that of other regions of Scotland. This study instead concluded that the archaeology of Galloway was embedded within underlying patterns of settlement, hierarchy and culture apparent across Scotland during this period.

Drawing on the accumulated work, Iron Age and early medieval settlement patterns were then examined from a variety of local, regional, national and chronological perspectives. Nucleated forts such as Trusty's Hill are proposed as one of several types of significant cultural expressions of power and prestige unique to early medieval Scotland. The archaeological evidence suggests profound cultural divergence between peoples north and south of what later became the Anglo-Scottish Border.

Furthermore, an array of Iron Age settlements found across Scotland was observed to be absent in England. This difference was the result of cultural

choices taken by households and communities and suggests markedly different Iron Age and early medieval societies north and south of the Tweed-Solway line.

Chapter 1: Introduction

This critical review addresses ten years of research publications by the writer, concerning the later prehistoric and early medieval (400 BC – AD 650) settlement record of Galloway. The output of this research, which comprises the published work submitted in support of this *PhD by Research Publication*, is listed in Appendices B-E.

For clarity, Galloway forms the south-western part of the Scottish mainland, comprising the former counties of Wigtownshire and the Stewartry of Kirkcudbright (Figure 1). Its traditional eastern border was the river Nith and the county of Dumfriesshire while the Galloway Hills formed its northern boundary. It is bound on the west by the North Channel of the Irish Sea and to the south by the Solway Firth and the Irish Sea.

The central research aim of the body of published work initially sought to establish whether a distinct regional identity could be identified within the wider context of distinctive regional later prehistoric and early medieval settlement patterns across other parts of Scotland. The early focus of this research examined coastal promontory forts (Appendices A and B), one of the site types that had previously been noted as characteristic of settlement patterns in Galloway. This was followed by the investigation of a small sub-rectangular hillfort (Appendices C and D), an example of another distinguishable site type in Galloway. As the research progressed, and with no clear evidence for a distinctive settlement pattern, the central research aim was adapted to the examination of common characteristics that settlement patterns in Galloway shared with the rest of Scotland and the cultural significance of these characteristics (Appendix E).

The work was undertaken within an over-arching empirical framework based on evidence-led research. Throughout the progress of the research the fieldwork results were critically examined principally in comparison and contrast with the empirical results from other excavations with less emphasis given over to purely theoretical approaches.

The objective of this critical review is to set out the empirical evidence that leads to the conclusions set out in Chapter 7. After laying out the background to archaeological research in Galloway in Chapter 2, key empirical evidence recovered from the author's surveys and excavations, such as site distributions and morphology, stratigraphy and chronology and material

culture are drawn out and discussed in Chapters 3-5 to review the nature of site occupation and closure, the comparisons and contrasts that can be drawn with other sites within a local, regional, national and supranational context and the place of the examined sites within their contemporary social landscape. A critical re-examination of later prehistoric site classifications and the regional approach to Iron Age research in Scotland in Chapter 6 incorporated the fieldwork results to set out the basis for adopting a different perspective to later prehistoric and early medieval settlement patterns in Galloway from the prevalent point of view.

Throughout the course of this research, a great number of specialists have contributed to the analyses of artefacts and features recovered or exposed during the excavations, including Alan Duffy, Rob Engl, Jane Evans, Vanessa Pashley, Matt Horstwood, Lynne Fouracre, Fraser Hunter, Rob Inglis, Beverley Ballin Smith, Torben Ballin, Cathy Batt, Alice Blackwell, Ewan Campbell, Gemma Cruickshanks, Mary Davis, Karen Deighton, Katherine Forsyth, Derek Hamilton, Laura Hamlet, Samuel Harris, Susan Ramsay, Ben Stern and Cynthia Thickpenny. The contribution of a geophysics survey and a contour survey of Carghidown by Tessa Poller and Alan Hunter Blair is acknowledged too. Graphics for the various publications were prepared by Andrew Aspinall, Graeme Carruthers, Alan Hunter Blair, Gillian McSwan and Fiona Jackson. Especial acknowledgment is due to Christopher Bowles, co-director of the Trusty's Hill excavation. The process of preparing each publication in concert with the relevant specialist contributors and co-author is set out separately in Chapters 4 and 5.

Chapter 2: Review of previous archaeological research in Galloway

Over the years, the later prehistoric and early medieval settlement record of Galloway has received rather intermittent attention, which has resulted in the region being described respectively as a 'Black Hole' and 'Cinderella' of Scottish Iron Age studies (Haselgrove et al. 2001; Banks 2002). Given these perceptions, it is first necessary to examine previous work, from the earliest antiquarian endeavours to current programmes of archaeological research, to provide a context to the writer's contribution.

While antiquarian interest was apparent in Galloway just as it was in other parts of Scotland as early as the late eighteenth century, as demonstrated by the references to local vitrified forts such as the Mote of Mark (Riddell 1792, 148-9) and Trusty's Hill (Gordon 1794, 351) or local promontory forts such as Carghidown (Davidson 1795, 287), it was not until nearly the middle of the nineteenth century that research into site types began to be undertaken in earnest. The Ordnance Survey 25- and 6-inch maps surveyed in the 1840s and 1850s were the first to record the location of various prehistoric settlement forms in the landscape of Galloway. Crannogs such as those at Dowalton Loch were the first site type in the region to be subject to more detailed examination and discussed in the context of similar sites in other parts of Scotland as well as Ireland and lakeside pile-dwellings in Switzerland (Stuart 1866; Munro 1882; Wilson 1882). A variety of 'ancient' settlements in Wigtownshire were described too (Wilson 1885), Roman Iron Age remains excavated at Borness Cave (Corrie et al. 1874; Clarke 1876; Clarke 1878) and the first excavations undertaken at Whithorn by William Galloway in 1886-97.

Frederick Coles, inspired in 1890 by David Christison then Secretary of the Society of Antiquaries of Scotland who was undertaking a survey of forts in neighbouring Dumfriesshire (1891), provided the first regional study comprising detailed measured site surveys of prehistoric earthworks in the Stewartry district (1891; 1892; 1893). Interestingly he noted local knowledge of these structures, in contrast to his experience of other parts of Scotland (Coles 1891, 353), including on previous excavations at the Mote of Mark (Coles 1893, 96) testified by E ware catalogued in 1890 in the National Museum collection (Laing & Longley 2006, 1). His fieldwork enabled him to draw rudimentary comparisons and characteristics of different individual

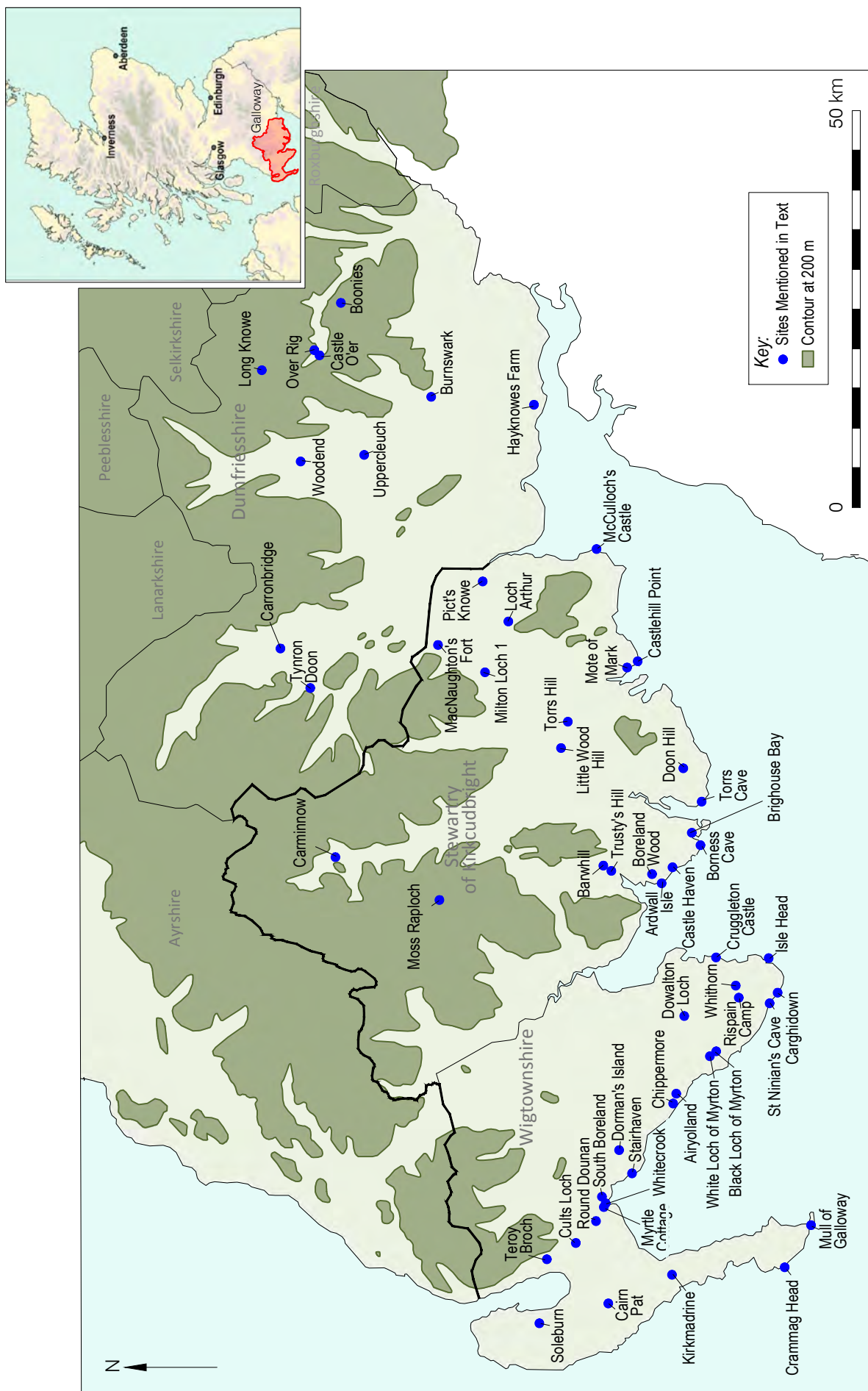


Figure 1: Map of Galloway showing sites mentioned in text (prepared with assistance from Jennifer Simonson)

enclosed settlements, such as the differing compositions (earth and/or stone) of their enclosing works, thus separating the settlement record into broad site types - forts, motes and doons (Coles 1891, 355). This work was followed by James Barbour's excavation and measured survey of Rispaan Camp in the Machars of Galloway (1902) and his measured survey of James Brown's excavation of Castle Haven in the Stewartry (Barbour 1907).

These early records were subsequently consolidated with the first properly measured plans surveyed by the newly formed Royal Commission on the Ancient and Historical Monuments of Scotland. Alexander Curle, the Royal Commission's first secretary, worked his way across the region in the pre-WWI years to prepare the Inventories for Wigtownshire, Stewartry of Kirkcudbright and Dumfriesshire (RCAHMS 1912; 1914; 1920) as well as undertaking excavations of Teroy Broch (Curle 1912) and the Mote of Mark (Curle 1914).

This early work in Galloway is important because it exhibits the development of antiquarian endeavours into measured archaeological surveys. In hindsight, the survey work of Stuart, Munro, Coles, Barbour and Curle places the investigation of later prehistoric settlements in Galloway at the forefront of archaeological methodologies in Scotland before World War I. It is unfortunate that excavation recording techniques had not similarly developed. Inadequate recording and analyses of the trenches, stratigraphy and modest artefactual assemblages of Rispaan Camp and Castle Haven meant that at neither site could the evidence recovered be closely dated and thus occupation be demonstrated as later prehistoric. While Curle's much better recorded investigation of the Mote of Mark recovered a large assemblage of artefacts, allowing him to interpret an earlier Roman Iron Age and a subsequent ninth century phase of occupation, he failed to identify any diagnostic artefacts from Teroy Broch that could then be dated (1912, 186-188), though one pottery sherd has since been identified as Roman coarse ware (Hunter et al. 2018, 216). It may be that this dearth of finds from most of the earliest excavations curbed further fieldwork in the region in favour of sites elsewhere in Scotland, such as Traprain Law in East Lothian, that could yield a richer material assemblage (Curle 1915; Curle & Cree 1916; Curle 1920; Curle & Cree 1921). Though Torrs Cave yielded as rich an assemblage of Roman Iron Age artefacts (Morris 1937) as that recovered from Borness Cave on the other side of Kirkcudbright Bay, Vere Gordon Childe's excavation of Carminnow Fort did nothing to reignite interest, revealing yet

another materially impoverished site (1936, 346), as was the fort at Chippermore (Fiddes 1953). Margaret Piggott's highly significant excavation of Milton Loch Crannog 1 on the other hand, though again yielding a modest artefactual assemblage, nevertheless revealed superbly preserved structural remains that provided the basis for the standard perception of a Scottish crannog for decades thereafter (Piggott 1955, 141; Guido 1974; Morrison 1985, 17-18; Armit 1997, 34).

The excavations of Chippermore and Milton Loch Crannog 1 were contemporary with the RCAHMS' Marginal Land Survey undertaken between 1951 and 1958 (RCAHMS 1955; Geddes 2013, 365-376), when a number of settlement sites were recorded by measured survey, the only element of a national programme of surveying that had been undertaken in Galloway since Curle's work earlier that century. This sustained nationwide study spurred one of the RCAHMS' archaeologists, Richard Feachem, to identify subsets within the later prehistoric and early medieval settlement record of Galloway (1956; 1966; 1977), which acted to validate the regional division of the Iron Age settlement record across Scotland (RCAHMS 1956, 15-16; Piggott 1966, 4-5). Feachem singled out distinctive site types such as small sub-rectangular forts and promontory forts in Galloway in contrast to Dumfriesshire where hillforts and large enclosed settlements predominated (1966, 76). Feachem also drew a division between eastern Scotland where hillforts and large settlements are key components of the record and western Scotland where duns and brochs are more frequent (1966, 86). Piggott's and Feachem's work was enormously influential as it introduced a pervasive framework of provinces and corresponding perspective of regionalism to later prehistoric settlement studies in Scotland that has persisted since (Armit & Ralston 1997, 169-171; Harding 2004, 6; Halliday & Ralston 2009, 460).

With regard to other forms of early medieval settlement, namely ecclesiastical sites, Whithorn has provided a focus for repeated campaigns of investigation, where William Galloway's unpublished 1886-97 excavations were followed by those of CA Raleigh Radford in 1949-51 and 1953 (Raleigh Radford 1957), P R Ritchie's in 1957-67 and Chris Tabraham's in 1972 and 1975 (Tabraham 1979), culminating in Peter Hill's between 1984 and 1991 (Hill 1997). Though subsequent fieldwork at Whithorn followed (Pollock 1992; Pollock 1993; Clarke 1995; Clarke 1996; Lowe 2000, Morrison 2001, Lowe 2002, Morrison 2003) these interventions have yet to be fully published. Complementing the work at Whithorn, were investigations of a

range of other early medieval ecclesiastical sites in the region including Kirkmadrine (Stuart 1867; Mitchell 1872; Maxwell 1917; Reid 1957; Forsyth & Maldonado 2013), St Ninian's Cave (Raleigh Radford 1957) and Charles Thomas' excavations of an early medieval ecclesiastical settlement at Ardwall Isle (1966; 1967). This was itself preceded by his excavation of the nearby fort at Trusty's Hill, which despite yielding a paucity of artefacts he interpreted as being occupied in separate Roman Iron Age and post-Roman phases (1961, 66-68), a sequence similar to Curle's interpretation of the Mote of Mark.

It is important to give due prominence to the interest of the Dumfriesshire and Galloway Natural History and Antiquarian Society in the archaeological remains of later prehistoric and early medieval Galloway. The influence of the Society's Transactions editor, RC Reid, who had long advocated its excavation (1952, 163-64) spurred Charles Thomas, then recently arrived at Edinburgh University, to investigate Trusty's Hill in the first place (Thomas 2010 *pers. comm.*). Subsequently, a series of excavations of later prehistoric and early medieval settlements was undertaken by prominent members of the Society, including McCulloch's Castle (Scott-Elliot 1964), MacNaughton's Fort (Scott-Elliot et al. 1966) and just outwith Galloway, the hillfort of Tynron Doon (Williams 1971). The last site yielded a respectable assemblage of early medieval artefacts while the others yielded either no artefacts of later prehistoric date or much more modest assemblages. A large influence behind this work was the Curator of Dumfries Museum, Alfie Truckell, who had long taken and would continue to take a particular interest in the later prehistoric and early medieval settlement record of Galloway. This included identifying evidence for potential early medieval occupation at Castlehill Point (Truckell 1955), identifying a group of nucleated forts in the Stewartry (Truckell 1963, 94-5), instigating the excavation of Tynron Doon (Truckell 1966) and comparing and contrasting Iron Age settlement patterns between the eastern and western parts of Dumfries and Galloway (Truckell 1984).

The Mote of Mark was revisited by Lloyd Laing and David Longley who undertook excavations in 1973 and 1979 using enhanced artefact typologies and radiocarbon dating to reveal a single and much more compressed occupation during the sixth - mid seventh century AD than previously understood (Laing & Longley 2006, 24). Rispain Camp too was re-examined in 1978-81, when George and Alison Haggarty's excavations resulted in a radically different chronology, that of an Iron Age rectilinear settlement

instead of the medieval homestead that it was previously understood to be (Haggarty & Haggarty 1983, 25).

Aside from these relatively large-scale excavations, between the 1970s and 1990s there was a noticeable shift eastwards to Dumfriesshire in the focus of research into later prehistoric settlements in Dumfries and Galloway. Following his review of the settlement record here (1971), George Jobey undertook excavations at the Boonies (Jobey 1975) and Burnswark (Jobey 1978) while others targeted further later prehistoric settlements such as Long Knowe (Mercer 1981), Uppercleuch (Terry 1993), Carronbridge (Johnston 1994), Woodend (Banks 2000), Hayknowes Farm (Gregory 2001), and Castle O'er and Over Rig (Mercer 2018), the last two of which complemented a comprehensive survey of archaeological monuments and synthesis of the later prehistoric settlement record in East Dumfriesshire (RCAHMS 1997, 78-86) which has led some to consider Iron Age origins for medieval estate patterns in Dumfriesshire (Halliday 2002, 102-103). In Galloway, however, only small-scale investigations were conducted at Moss Raploch hut circle (Condry & Ansell 1978), Doon Hill hillfort (Crone 1982), Stairhaven broch (Yates 1983), along with the identification of an Iron Age phase of occupation beneath the medieval remains of Cruggleton Castle (Ewart 1985) and fragmentary remains of Iron Age activity and occupation at Brighthouse Bay near Kirkcudbright (Maynard 1994) and Pict's Knowe (Thomas 2007). Excavation of an Iron Age settlement at Soleburn in the Rhins of Galloway (not Fox Plantation as erroneously interpreted prior to radiocarbon dating results (contra MacGregor 1996)) and the small-scale evaluation of the ramparts at the Mull of Galloway (Strachan 2000) remain unpublished. There were also surveys across the West Rhins and East Rhins of Galloway (RCAHMS 1985; RCAHMS 1987), the Stewartry of Kirkcudbright (McKeague 1991; Cowley 1996), the Solway coast (Cressey & Toolis 1997) and reviews of crannogs across south-west Scotland (Barber & Crone 1993; Henderson 1998). The records and artefacts from Dowalton Loch were also re-examined within a local context (Hunter 1994). The spur for these fieldwork projects ranged from university based research (Jobey 1975; Jobey 1978; Mercer 1981; Gregory 2001; Laing & Longley 2006; Thomas 2007; Mercer 2018) and locally driven research (Condry & Ansell 1978; Yates 1983), to historic resource management (Haggarty & Haggarty 1983; Ewart 1985; RCAHMS 1985; 1987; 1997; McKeague 1991; Barber & Crone 1993; Cressey & Toolis 1997; Strachan 2000) and mitigation in advance of development (Crone

1982; Terry 1993; Johnston 1994; Maynard 1994; Banks 2000). It can be seen that while university based research was focussed on Dumfriesshire, Galloway received almost as many of the other types of projects as Dumfriesshire. The key absence from the corpus of Galloway studies was a region-wide synthesis.

This was certainly perceived in a wide-ranging review of archaeological research into Iron Age Britain, in which Galloway was referred to as a black-hole region where site types were ill-defined or unknown and where modern research had yet to be undertaken beyond the site specific (Haselgrove et al. 2001, 28-29). This was already not entirely accurate by the time it appeared, given Cowley's review of later prehistoric settlement patterns across Dumfries and Galloway (2000). Research into later prehistoric and early medieval Galloway has since developed significantly beyond this, with further regional reviews (Wilson 2001; Banks 2002; Cavers 2008; Toolis 2015 - Appendix E) and RCAHMS aerial surveys targeted particularly, though not exclusively, across the East Rhins of Galloway which have revealed significant numbers of cropmarks (Cowley & Brophy 2001; Cowley 2002). Most significantly, targeted fieldwork has also been undertaken, albeit with varying results. Some of this work was driven by development, such as Cairn Pat, Crammag Head, Whitecrook, Myrtle Cottage and South Boreland, the first two sites in the west Rhins of Galloway, the latter three around Dunragit in the east Rhins (Fulford 2001; Hindmarch 2009; Gordon 2009; Arabaolaza et al. 2015, 115-123; Engl & Wilson 2015). Historic resource management has driven surveys at Boreland Wood (Devereux & Collin 2002) and the Round Dounan (Baker & O'Flaherty 2014), the latter again at Dunragit in the East Rhins of Galloway. While PhD research has been pursued (e.g. Poller 2005; Cavers 2005; Wood 2016; Horn 2017), the bulk of fieldwork has been largely undertaken by archaeologists based in private companies not universities, in contrast to preceding decades, and with significant local community participation. Research has focused on specific site types, such as promontory forts including Carghidown and Isle Head (Toolis 2003 - Appendix A; Toolis 2007 - Appendix B; McCarthy et al. 2010), the nucleated fort at Trusty's Hill (Toolis & Bowles 2013 - Appendix C; Toolis & Bowles 2016 - Appendix D), crannogs including Cult's Loch, Dorman's Island, Loch Arthur and White Loch of Myrton (Henderson et al. 2003; Henderson et al. 2006; Cavers & Crone 2010; Cavers et al. 2011; Henderson & Cavers 2011; Cavers et al. 2016), the lakeside enclosed settlement at

Black Loch of Myrton (Cavers & Crone 2013; Cavers & Crone 2016) and other enclosed settlements including Airyolland, Barwhill, Little Wood Hill and Torrs Hill (Cavers & Geddes 2010; Jones 2014; Derek Alexander et al. 2014; Hunter et al. 2016). The crannog research in Galloway has played a significant part in enhancing chronological frameworks for such settlements across Scotland as a whole (Crone 2012) and integrated excavations of a range of neighbouring wetland and dryland sites at Cults Loch in the East Rhins (Cavers & Crone 2018).

While the region is still apparently viewed as somewhat peripheral in national syntheses of Iron Age Scotland (Cavers 2008, 13), Galloway has never received as much sustained archaeological research as in recent years (Chart 1). The integration of new and ongoing research (Murray 2014) into future national syntheses may in time enhance this perception, embedding the archaeology of Galloway more fully into underlying patterns of settlement, hierarchy and culture across Scotland as a whole (Toolis 2015, 28 - Appendix E).



Chart 1: Number of excavations of Later Prehistoric/Early Medieval sites conducted in Galloway

Chapter 3: Discussion of the findings of prior archaeological research - the Promontory Forts of the Galloway Coast

While outwith the parameters set for published work submitted in support of this *PhD by Research Publication*, the results of the writer's initial research on the later prehistoric and early medieval settlement record in Galloway (Toolis 2003; Appendix A) represent an essential context for the first of the submitted works, which is reviewed in Chapter 4 (Toolis 2007; Appendix B). This programme of surveys was undertaken with the help of volunteers, in the author's own time and largely at his own expense.

From the start, this contribution to Iron Age research in Galloway attempted a regional approach. Surveys of sixteen promontory forts along the Galloway coast were undertaken in 1996-97 (Toolis 2003, 37-38; Appendix A), following a Coastal Assessment Survey of the North Solway Coast (Cressey & Toolis 1997). The selection of promontory forts as the subject for survey followed the distinguishing of this site class within the regional later prehistoric settlement record (Feachem 1966, 76) and the recognition of a distinctive distributional pattern within the corpus of archaeological sites on the North Solway Coast (Cressey & Toolis 1997, 474-476). While the post-medieval and modern monuments on the North Solway Coast are almost exclusively of industrial, maritime or military attribution, the Iron Age and early medieval coastal monuments, represented largely by promontory forts, are places of settlement located generally on the seaward limits of agricultural ground, predominantly high ground but not exclusively. Promontory forts appear then to offer a marked contrast with the settlement record of the medieval period onwards, during which this geographical setting seems to have been much less favoured for settlement. Localised coastal erosion at many of these promontories, together with the impacts of agriculture, development and tourism, led to a recommendation within the Coastal Assessment for further surveying and monitoring (Ibid., 476).

Promontory forts represented a good starting point to examine a sample of later prehistoric settlements in Galloway, especially as very limited excavations had previously been undertaken in the region and of these none had furnished recurrent characteristics. McCulloch's Castle, for instance, is a semi-circular ditched enclosure, lying at the edge of a straight coastal cliff,

a broadly comparable topographic location to a promontory fort. Excavations revealed a stone wall crowning the earth rampart and outer ditch which defined the site and a possible gateway between the cliff edge and the western rampart terminus (Scott-Elliot 1964, 118-121). However, the interior of the site had been heavily disturbed by an early twentieth century ornamental garden so while a high number of post-holes were revealed, no definite interior structures could be identified (Ibid., 119-123). The only demonstrably original internal feature was a hearth, from which a sherd of mid second century AD samian ware was recovered (Ibid., 123).

Cruggleton Castle, a seat of the medieval Lords of Galloway, was excavated between 1978 and 1981 in response to coastal erosion (Ewart 1985, 6). The earliest occupation of this coastal promontory was represented by the partial remains of a roundhouse from which a radiocarbon date of AD 50 + 70 was recovered (Ibid., 12-14). The next phase was represented by a timber hall, apparently occupied between the mid-eighth and twelfth century AD, before subsequent constructions transformed this site into a stone castle (Ibid., 18-22). A bronze bow brooch of the mid-first to mid-second century AD (Caldwell 1985, 64), albeit from a disturbed context, provided further evidence of Iron Age occupation and led the excavator to propose a primary promontory fort (Ewart 1985, 14), although the subsequent occupation of Cruggleton Castle had removed evidence of Iron Age defences.

However, while the evidence accumulated from McCulloch's Castle and Cruggleton Castle corresponds broadly with the chronology of occupations established at other promontory forts within the British Isles, neither of these Galloway sites provided substantial evidence for the nature of the original construction, occupation, status and function.

Of the 50 promontory forts along the Dumfries and Galloway coastline, 25 are located on the North Solway Coast between the Mull of Galloway and the River Nith, with none further east (Figure 2). From this number, 16 sites were selected for measured surveys, the rest being either inaccessible due to excessive vegetation, or not requiring re-survey in the light of previous investigation or development.

The results, arranged from west to east, included a description of each site, its topographical location, its condition and a measured site plan (Toolis 2003, 42-60; Appendix A). The site plans demonstrated a considerable variety of attributes (Table 1).

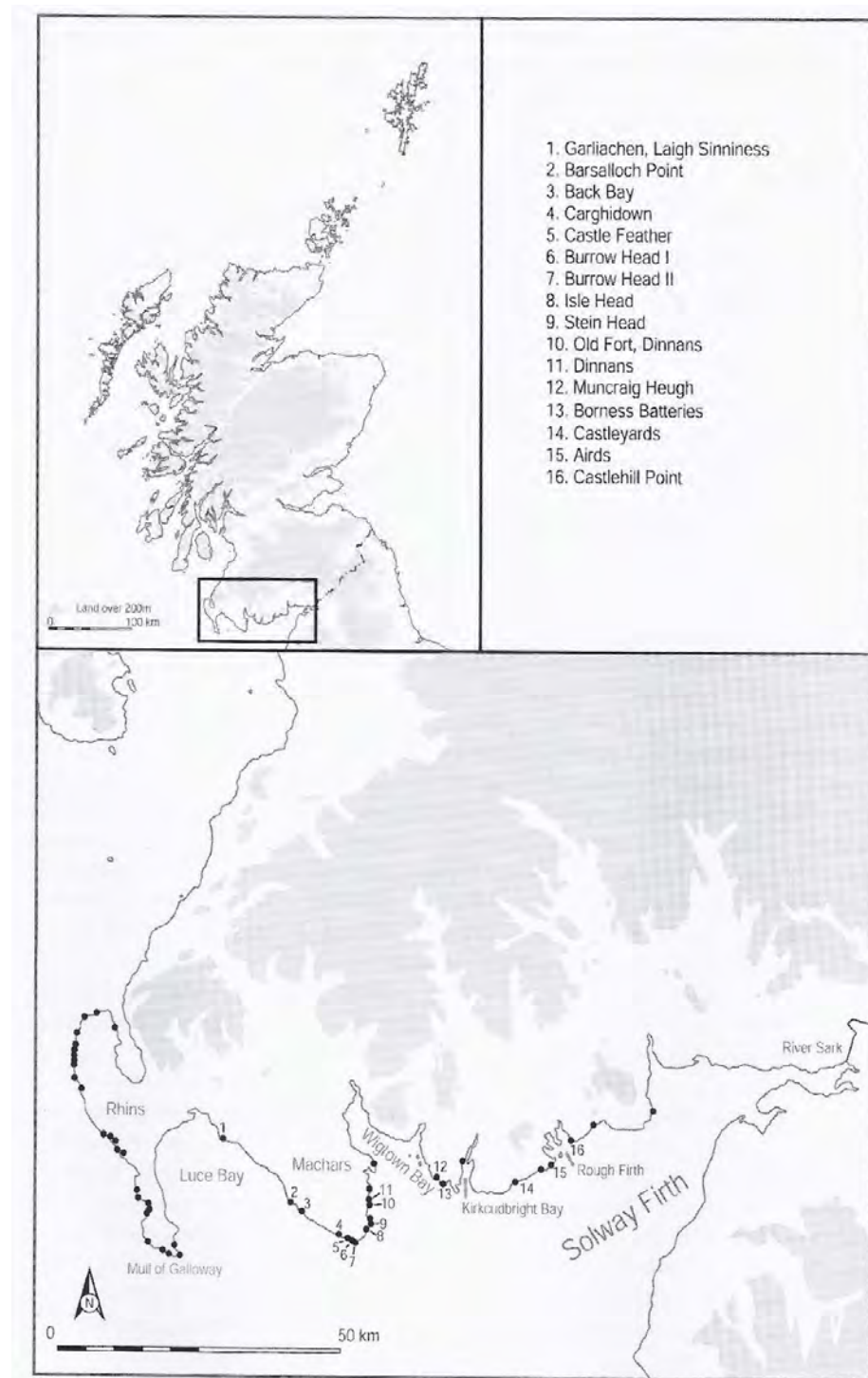


Figure 2: Distribution of Galloway Promontory Forts and sites selected for survey

Little of the nature of occupation was revealed, as internal structures were rarely apparent within the selected sites and where they were apparent were more often indicative of secondary occupation. The absence of surface

traces of interior features does not however preclude the sub-surface survival of remains. Indeed, modern cultivation had evidently distorted the record at many of the sites. The survival of visible interior features within Back Bay, Carghidown and Isle Head seemed therefore even more remarkable. The two circular features facing an open 'courtyard' at Carghidown draw parallels with Boonies in East Dumfriesshire, where the internal layout was divided between a living area of successive roundhouses and an open yard (Jobey 1975, 138). The internal features apparent at Isle Head are concentrated in the central raised area of the site, which could mean theoretically that the remaining lower areas of the site fulfilled a similar open yard role.

	Multi/ Univallate ramparts	Curvi/ Linear rampart	Earth/ Stone rampart	Internal Features evident	Size Group (1/2/3)	Inter- visible	Access to the Sea
Garliachen	M	-	St	-	3	✓	✓
Barsalloch	M	C	E	-	2	✓	✓
Back Bay	U	C	St	✓	2	✓	✓
Carghidown	U	L	E	✓	3	✓	-
Castle Feather	M	L	St	✓	2	✓	-
Burrow Head I	M	C	E	-	3	✓	-
Burrow Head II	U	L	E	-	3	✓	-
Isle Head	M	C	St	✓	1	-	✓
Stein Head	M	C	E	-	2	✓	-
Old Fort Dinnans	M	C	E	-	2	✓	-
Dinnans	U	C	E	-	1	✓	✓
Muncraig Heugh	U	C	E	-	3	✓	-
Borness Batteries	M	C	St?	-	2	✓	✓
Castleyards	U	C	E	-	2	-	✓
Airds	M	C	E	-	3	✓	✓
Castlehill Point	M	C	St	-	2	✓	✓

Table 1: Site characteristics of promontory forts selected for survey

While the substantial disparity in size between Isle Head and Carghidown inhibits drawing too close a parallel between these two sites, that the internal features at Back Bay also congregate within a specific limited area, leaving the remaining interior ground as an open area, does suggest the possibility of a common internal layout pattern of an area occupied by buildings juxtaposed with an open space amongst the Galloway promontory forts where this can be discerned.

The size of the internal areas amongst the sites in this survey varied from the exceptional large site of Isle Head (12,800m²) to the very small Muncraig Heugh (320 m²). While coastal erosion had clearly reduced the internal areas of some examples, generally the promontory forts appeared to fall into three groups (Table 1):

1. two large sites over 2,000 m² in internal area;
2. eight sites between 800 m² and 1500 m² in internal area and;
3. six sites between 320 m² and 500 m² in internal area.

However, no correlation could be drawn between the size of sites and any obvious characteristic in their morphology. Intervisibility between different promontory forts including those outwith the group selected for survey and other potentially contemporary inland sites was also observed but very few sites were inter-visible with those along the same coastline and the apparent inter-visibility with distant sites on opposing coastlines (such as the Machars and Rhins) may be no more than an accident of geography.

Perhaps surprisingly, given their proximity to the sea, only half of the surveyed sites are adjacent to bays or obvious landing places, where access to the sea is available. Within the selected group of Galloway sites, the only correlations that could be drawn between site characteristics such as size or morphology and access to the sea was that access to the sea is much less common amongst the smallest sites (Group 3); and that at none of the sites with linear defences was access to the sea apparently an attribute.

One of the survey's observations regarding the apparently 'defensive' nature of the sites was that while some were suitably defensive locations such that medieval castles subsequently occupied them, many promontory forts were not, occupying instead often precarious clifftops starkly overlooked from their immediate hinterland. Other medieval coastal sites with no evidence for earlier occupation, such as Kirkclaugh motte and bailey and Raeberry Castle, demonstrate that defensive locations on the North Solway Coast were not limited to reuse of the sites of earlier promontory forts. So, while it was possible to interpret an impression of defence at some of the promontory forts, such as substantial or multiple ramparts, it was observed that very few seemed to occupy truly defensive locations, notably a raised locale that offered the occupants an advantage over an assault from neighbouring ground.

While the promontory forts of Galloway's coastline had been noted in the past as a distinctive regional settlement type (Feachem 1966, 76), their site plans demonstrate considerable variety in interior sizes, the scale and morphology of defining boundaries and topographical attributes. Similar diversity is however apparent in the general distribution of later prehistoric enclosed and fortified settlement forms in Galloway (Cowley 2000, 173). Equally, where internal settlement layouts are visible on promontory forts, the organisation of such features adheres to patterns identified within inland settlements. Thus, promontory forts do not appear to represent a distinct, homogenous settlement form distinguishable from the general regional settlement record. Observations of the morphological traits of promontory forts on the western coast of the Rhins of Galloway (RCAHMS 1985, 14-19) support this diversity.

In sum, while easy to group in terms of topography, the label 'promontory forts' covers a variety of dissimilar sites, much in the same way that 'hillforts' hides a disparate heterogeneous assemblage of sites. The promontory forts of the Galloway coast therefore appear to be simply manifestations of a range of inland settlement forms distributed across the region. This perspective is demonstrated by the concentration of stone walled promontory forts on the west coast of the Machars and along the central Galloway coastline, a pattern which adheres to corresponding inland concentrations of stone walled settlements within these districts of Galloway (Cowley 2000, 172). Furthermore, Isle Head and Castlehill Point, which stand out in exhibiting evidence of complex defences at places of strength with ready access to the sea, may belong to a class of pre-eminent site evident elsewhere in the region. Promontory forts may thus not be a distinctive type of site within Galloway's later prehistoric settlement record. Further archaeological evidence for the nature of occupation of promontory forts in Galloway was nevertheless required if the relationship of these sites to their contemporary landscape, land-use and the wider settlement pattern was to be clarified.

In planning additional fieldwork research of Galloway's promontory forts, consideration was therefore given to selecting an appropriate site from this sample. So, in addition to creating accurate measured site plans, the survey also measured the extent of erosion at each site and determined the cause of that erosion in each case. This was carried out to appraise the condition of the selected sites, a prerequisite if detailed investigation was to be

undertaken, based on the relative values and costs of such work (Ashmore 1994, 39). The results of the survey demonstrated that all the selected sites were affected, to a greater or lesser extent, by erosion of some form. The types of erosion apparent included coastal erosion and slope failure, animal impacts, agricultural impacts, root activity and footpath erosion.

Comparison between previous site plans and those produced in the survey demonstrated that active coastal erosion was evident at seven sites. Slope failure, where the overlying till was being eroded at a faster rate than the underlying geology was an important aspect of this coastal erosion, for while the underlying geology may be more impervious to weathering and wave attack, it is within the overlying and more vulnerable till that the archaeological remains survive. After the measured site surveys, monitoring of one of the affected sites, Carghidown, was undertaken by the author during the pilot *Shorewatch* scheme; this demonstrated localised coastal erosion of both the north-western and south-eastern sides of the promontory, the soft till being gradually removed from the cliff edge by slope failure and constant weathering (Toolis 2001). It was thus apparent at such sites that seemingly relatively insignificant erosion of the underlying cliff had resulted in slope failure, which had led to the ground surface being broken and the underlying till being exposed to weathering. The significant slope failure evident at Carghidown was thus assessed to present a more immediate threat than the periodic erosion of the underlying geology at other sites. Furthermore, the slope failure apparent at this site was assessed to be of consequence as it was the rare preservation of internal features within this promontory fort that was under threat.

The selection of Carghidown for more extensive examination, reviewed in the following chapter (Toolis 2007; Appendix B) was thus underpinned by survey work at the regional scale. Both the nature of the surviving remains here, and the nature, scale and speed of ongoing damage at Carghidown, identified it as possessing potentially significant archaeology meriting rescue excavation.

Chapter 4: Discussion of the findings from the excavation of Carghidown Promontory Fort

Excavation strategy

Over two seasons of fieldwork in 2003 and 2004, the writer directed the excavation of Carghidown promontory fort in response to coastal erosion (See Chapter 3) and with the aim of investigating the primary occupation of a later prehistoric settlement within a lowland landscape in Galloway. The final report was published by the Society of Antiquaries of Scotland (Toolis 2007; Appendix B).

Carghidown is located on the western coast of the Machars peninsula, a few miles south-south-west of Whithorn (Figure 3). It lies 30m above sea level at the foot of steeply seaward-sloping pasture fields. Being quite starkly overlooked from the immediate hinterland it seemed an inherently indefensible location for a fortified settlement (Toolis 2003, 63; Appendix A).

Of the five promontory forts identified during the survey as under threat from coastal erosion, its impact on three sites situated along the southwest coast of the Machars peninsula, Back Bay, Carghidown and Castle Feather, was of concern as each possessed comparatively rare, well-preserved remains of internal features, albeit these are probably secondary medieval features in the case of Back Bay and Castle Feather (*Ibid.*, 64 & 70-1). Carghidown was therefore identified as especially significant in preserving identifiable and apparently undisturbed remains relating to the original prehistoric occupation of the site (*Ibid.*, 45-47 & 64). Complex stratified deposits within any kind of later prehistoric settlement in Galloway are uncommon and of the few substantial modern excavations in Dumfries and Galloway, most had only tackled cropmarks or plough-truncated sites (Haggarty & Haggarty 1983; Johnston 1994; MacGregor 1996; Banks 2000; Gregory 2001). The excavation of Carghidown therefore sought to retrieve evidence that could be compared with information from the wider later prehistoric settlement distributions in Galloway. The objectives of the excavation were to recover and analyse archaeological evidence for the nature of occupation of a Galloway promontory fort and its relationship to its contemporary landscape, land-use and the wider later prehistoric settlement pattern.

The 2003 excavation initiated with a contour survey to record in 3D the apparent surface features (Poller et al. 2007, 268 & Illus. 3).

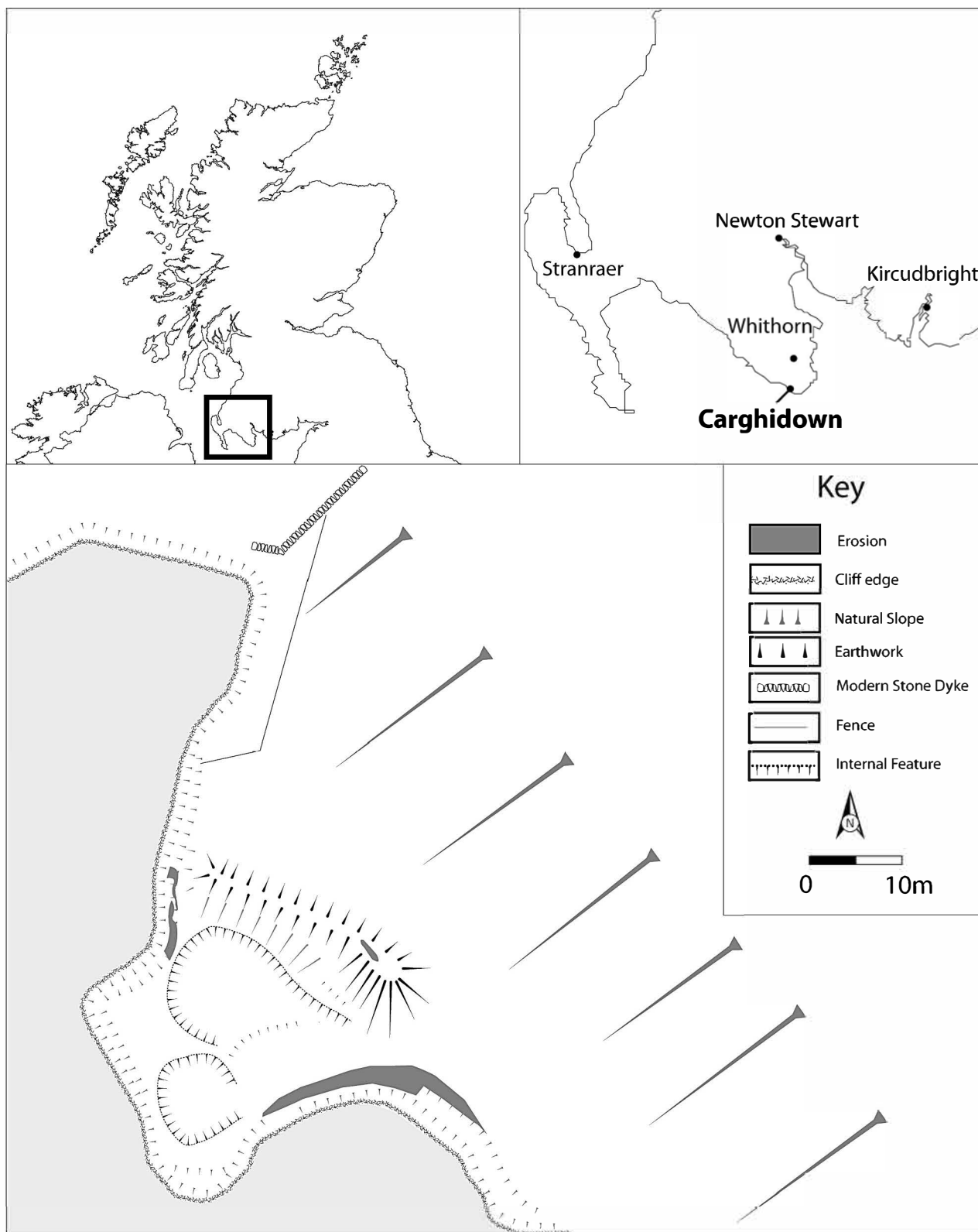


Figure 3: Location map and site plan of Carghidown

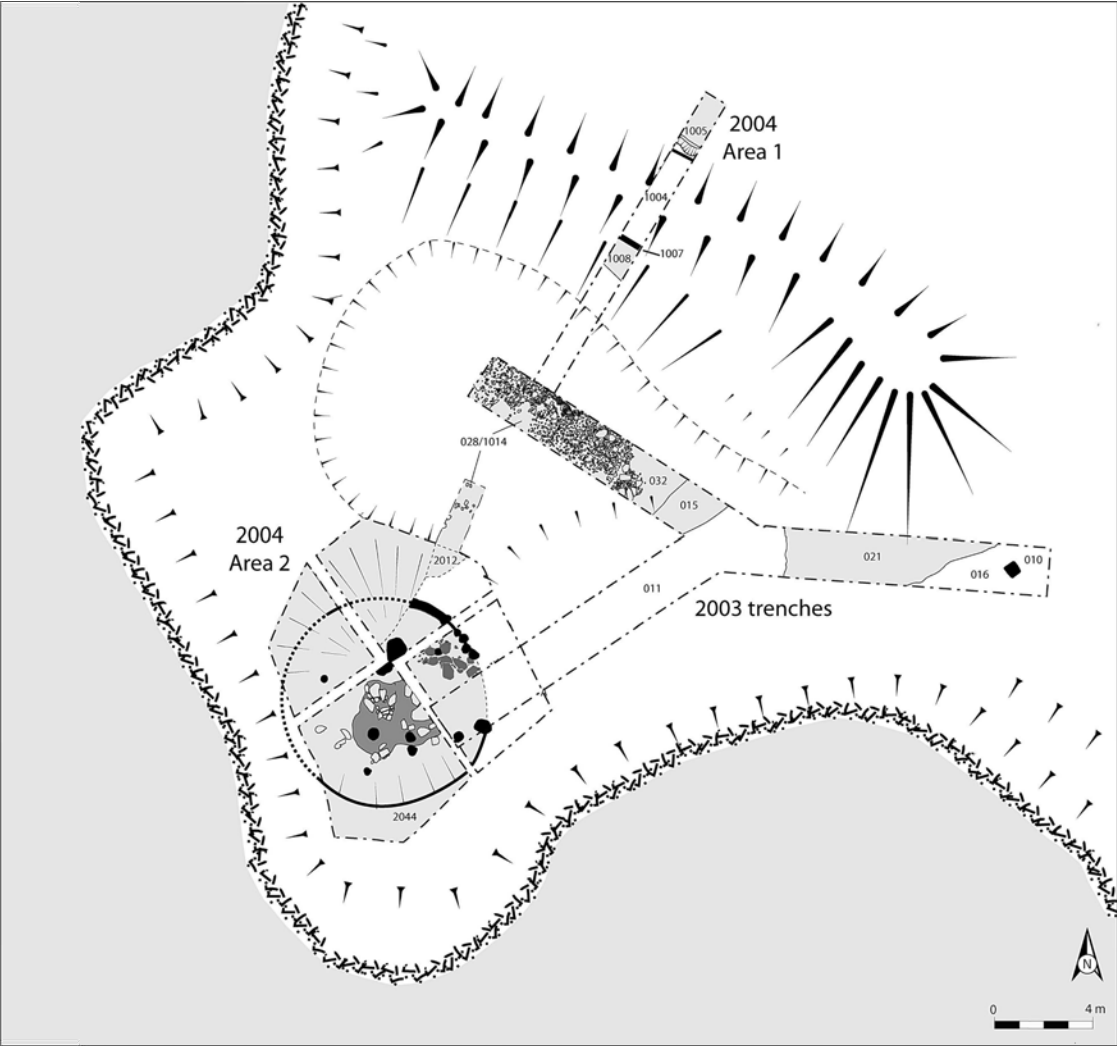


Figure 4: Phase 4 Plan of Carghidown

Geophysics techniques were also deployed to identify and survey further features, not otherwise visible, for excavation (Ibid., 269-271).

The excavation strategy comprised the examination of each of the constituent parts that defined the site: the rampart; the larger circular hollow immediately behind the rampart; the smaller circular hollow at its southern corner; the intervening open space (between the two circular hollows); and the entrance (Figure 4). The first season in 2003 also sought to identify sectors of the site worth targeting for further and more comprehensive excavation. During the 2004 fieldwork, the main target of the excavation was therefore the smaller circular hollow (Area 2) where a significant depth of potentially complex archaeological deposits had been encountered that could thus provide evidence relating to the occupation of the site. Another trench (Area 1) extended from the northern edge of the 2003 trench, up over the rampart and across into the external ditch at the point where a ferrous anomaly had been noted during the geophysics survey (Poller et al. 2007, 269-270).

The full results of the excavation and post-excavation analyses were set out in a scientific format report prepared by the writer as lead author (Toolis 2007; Appendix B). The background to the project was set out, followed by the fieldwork results which was separated into initial survey results and subsequent excavation results that included a description of each context, its inclusions and its stratigraphic relationships supported by appropriate plans, section drawings, photographs and an annotated Harris matrix. This was followed by separate post-excavation reports prepared by the various specialist contributors. The published report thus provided a comprehensive objective record of the excavation. The accumulated results of the excavation and specialist analyses were then examined within the wider local, regional and national context in a discussion section prepared solely by the writer.

Architectural traits and occupation of roundhouse

To demonstrate that the primary feature within Carghidown, the ring-groove, was indeed a roundhouse, a series of architectural traits consistent with other ring-groove roundhouses in Dumfries and Galloway was established (Toolis 2007, 297-302; Appendix B). This comprehensive compilation expanded our knowledge by drawing together for the first time a detailed inventory of architectural traits of Dumfries and Galloway roundhouses and drawing relevant comparisons with roundhouses elsewhere.

Traits considered included, for instance, the combination of continuous wall slot and intermittent post-holes for the outer wall, as at Rispain Camp (Haggarty & Haggarty 1983, 34) and Cruggleton Castle (Ewart 1985, 12) where the walls were envisaged to comprise a combination of plank walling and individual posts. Roundhouse walls comprising upright timber planking set in ring grooves were observed to be a common characteristic of roundhouses in southwest Scotland, from as early as the latter half of the second millennium BC (Ronan & Higgins 2005, 55-57), through the first millennium BC (Mercer 1981, 50 & 67) and into the early first millennium AD (Jobey 1975, 122-128). Similarities and dissimilarities between architectural features, such as the width of roundhouse entrances or the presence/absence of porches, was also observed in comparing Carghidown with other roundhouses (Toolis 2007, 297; Appendix B) demonstrating diversity across the region too.

Other architectural traits such as the diameter of the ring-grooves were examined. The Carghidown roundhouse was observed to be close to the median of the size range of other excavated roundhouses within the region. It was further observed that the roundhouses clustered around this median diameter were widely distributed geographically and chronologically (Ibid.). The actual floor surfaces of the Carghidown roundhouse however were measured to be only c. 2/3 of the overall diameter of its ring-groove (Ibid.). This same ratio was observed at another previously excavated roundhouse, Moss Raploch (Condry & Ansell 1978, 105). Given the plough truncated nature of many excavated roundhouses, the clear implication of the evidence from these two partially upstanding sites is that the actual surface of the living space within a ring-groove house may be considerably less than that suggested by its external diameter. Calculations of interior floor space from external diameter alone (e.g. Jobey 1975, 27-130), while useful for comparing *relative* floor spaces between roundhouses, may not reflect the actual floor spaces available. This observation, which was only possible due to the preservation of an upstanding wide earth and rubble bank into which the Carghidown ring-groove had been cut (Toolis 2007, Illus. 7 & 8; Appendix B), may well apply to ring-groove roundhouses outwith the region too.

Further wider patterns that Carghidown adhered to were observed (Ibid., 298). The exposure of the underlying natural subsoil indicated that the ground had been excavated down to subsoil prior to the formation of the earth and rubble bank, which probably derived from this same landscaping

process, as also envisaged at Broxmouth in East Lothian (Hill 1982, 173). A similar process of site clearance down to subsoil was observed at Woodend, Teroy Broch, Moss Raploch and Chippermere (Banks 2000, 248; Curle 1912, 186; Condry & Ansell 1978, 107; Fiddes 1953, 153). This preliminary site clearance is also reminiscent of the formation of scooped settlements in eastern Dumfriesshire (Jobey 1971, 87; Terry 1993, 53), where the quarried material would also have been available for subsequent use in construction.

The successive pebble and stone slab floors within the interior of the Carghidown ring-groove was recognised as an instance of a ubiquitous architectural trait across a range of well-preserved prehistoric, early medieval and medieval structures within Dumfries and Galloway (Toolis 2007, 299; Appendix B). The south-east orientation of the ring-groove entrance is also a common pattern amongst Iron Age roundhouses across Britain (Oswald 1997, 92-94; Fitzpatrick 1997, 77; Giles & Parker Pearson 1999, 219-229; Pope 2003, 172-174).

As well as the architecture of the Carghidown roundhouse, the evidence for its occupation was examined. This highlighted the wider context and the tentative identification of cultural practices. Limited soil chemistry results together with artefact deposition patterns led to the tentative identification of a central zone and a south-west peripheral zone of activity within this roundhouse, indicative of radial divisions around an open central space (Inglis 2007; Toolis 2007, 299 - Appendix B). This was noted as a common enough pattern of interior organisation within many better-preserved roundhouses elsewhere in Scotland, such as Sollas Wheelhouse (Campbell 1991, 127), Scalloway Broch (Sharples 1998, 39) and Fairy Knowe, Buchlyvie (Main 1998, Illus. 43).

Consistent with most later prehistoric settlements in south-west Scotland (Banks 2002, 31), Carghidown yielded very few artefacts. The modest assemblage of stone tools was not out of place within a domestic context and there seemed nothing remarkable about it in comparison with those from other settlements within Dumfries and Galloway (Toolis 2007, 300; Appendix B). The lack of any significant depth of occupation layers within the ring-groove was considered likely to be due to the regular sweeping of the interior surfaces, which was noted as evident elsewhere in the region as well as much further afield (*Ibid.*). It was recognised that the apparent paucity of artefacts might reflect extensive use of perishable materials or depositional

practices, rather than necessarily signifying material impoverishment (Ibid.). Traces of material wealth were demonstrated by the recovery of valuable metalwork from Rispaun Camp and Cruggleton (Hunter 1994, 55). At Carghidown itself this was evident in the form of three lead beads recovered from just outside the ring-groove and recognised as extremely rare and significant artefacts within a pre-Roman Iron Age native context (Hunter 2007, 284-5; Toolis 2007, 300 - Appendix B). The lead isotope evidence for these beads demonstrated a local source (Pashley et al. 2007) and the proximity of known copper and lead sources to the site underpinned the argument by the specialist that these artefacts were the result of experimentation with what was an unusual material extracted during the local mining of copper (Hunter 2007, 285-288). Whatever the reasons for their deposition, the lead beads placed a person or persons of elevated status at Carghidown precisely when the site was developed into a more formally organised and enclosed settlement (Toolis 2007, 300; Appendix B).

The radiocarbon dates obtained for this site spanned cal 360 BC – cal AD 60, at some point during which the occupation of Carghidown occurred. Further examination of these dates was undertaken in relation to the stratigraphic sequence of deposits to address concerns about the unlikelihood of such a long duration of organic materials at such an exposed location (Ibid., 301).

Comparisons between radiocarbon dating ranges and dendrochronological lifespans from wetland sites, such as Buiston crannog in Ayrshire and Deerpark Farm in Antrim (Barber & Crone 2001, 71-74), supported the argument that the actual duration of occupation at Carghidown was probably much shorter than the wide range of time that the radiocarbon dates alone might suggest (Toolis 2007, 301; Appendix B). The periodic renewal of floor surfaces within roundhouses at Buiston crannog (Crone 2000, 160) was also apparent at Carghidown where the floor surface was repeatedly renewed. That some of the posts belonging to the internal post-rings were also replaced but the more exposed outer wall remained largely intact indicated that the short occupation of Carghidown was broken by brief periods of abandonment, which necessitated repeated repairs and renewal of the building but not the replacement of the building in its entirety (Toolis 2007, 301; Appendix B).

It was calculated that the two roughly concentric post-rings within the Carghidown roundhouse (Figure 5) were unnecessary merely to support a roof but may additionally have supported an upper floor (Toolis 2007, 302; Appendix B) as postulated for similar structures (Reynolds 1979, 33; Reynolds 1982, 51; Haggarty & Haggarty 1983, 42). Furthermore, the sparse evidence for hearths or occupation debris was considered consistent with the occupation of the two-storey Atlantic roundhouse at Scalloway in Shetland, where the overwintering of animals on the ground floor and concurrent principal habitation of the upper floor were postulated (Sharpley & Parker Pearson 1997, 259). At Scalloway it was further proposed that this pattern of occupation was followed by the clearing out of animal dung and refuse to allow the ground floor to be used seasonally for a variety of domestic activities (*Ibid.*). The lack of occupation debris or any permanent hearth on the successive ground floors at Carghidown may be explained by a similar pattern of occupation (Toolis 2007, 302; Appendix B).

Settlement layout

The layout of Carghidown was examined in comparison with that of other sites in the region (*Ibid.*). The Carghidown excavation had revealed a settlement comprising a single roundhouse associated with an adjacent open yard enclosed by a rampart and external ditch (Figure 4). The yard, in its latter phase, was defined by a clay surface. The base of another circular platform on the north edge of the yard may have been intended to form the foundations of another roundhouse, but the absence of any post-holes or other structural or occupational features indicated that this had been halted at a very early stage of its construction. Carghidown was nevertheless separated between a roofed zone and an open zone, a layout common to many Iron Age settlements such as Boonies in East Dumfriesshire, where the internal layout was divided between a living area occupied by successive roundhouses and an open yard (Jobey 1975, 138). This 'house plus yard' layout was also evident at Upperclench (Terry 1993, 79) and Chippermere (Fiddes 1953, Figure 1) and had been observed at several other promontory forts on the Galloway Coast (Toolis 2003, 64; Appendix A) as well as other Iron Age settlements further afield (Jobey 1983, 199).

However, while the evidence from Upperclench, for instance, demonstrated that the open cobbled yard area was used for animal holdings (Terry 1993, 79), no comparable evidence, in the form of either high phosphate levels or

demonstration of wear patterns, was apparent at Carghidown. It was therefore not possible to identify any specific activities within the open zone of the settlement (Toolis 2007, 302; Appendix B).

Local parallels for the profile and dimensions of the Carghidown ditch were identified amongst inland and coastal sites (Ibid., 303). The original dimensions of the rampart were calculated by adding the volume of material slumped into the ditch to the surviving profile of the earthen bank. From this and the stratigraphy of earth and drystone fills (Ibid., 279-281) the original form of the enclosing bank was surmised, revealing it to be a drystone wall crowning an earth rampart. This was identical to that at McCulloch's Castle (Scott-Elliot 1964, Figure 2). Because the construction and destruction of the Carghidown rampart likely took place over a very short period (see below), it was thus recognised that the form of rampart at McCulloch's Castle was very probably as originally conceived, instead of comprising a secondary phase of drystone wall addition to an earth bank as envisaged by its excavator (Scott-Elliot 1964, 121). It was also established that differing architectural traditions were present in the enclosing works present across Dumfries and Galloway, between ramparts comprising earth banks crowned by a thick drystone wall as part of a single build, as now apparent at Carghidown and McCulloch's Castle, and the stone-capped (or encased) earth banks evident at Doon Hill, Camp Hill, Woodend, Upper Cleuch and Long Knowe (Toolis 2007, 303; Appendix B). While the latter are widely distributed across the region, the former, albeit representing a very small sample, adhere to a corresponding concentration of stone walled settlements across the western Machars and central Galloway (Cowley 2000, 173; Toolis 2003, 69; Appendix A). It is also clear that substantial resources spent in developing Carghidown into a more formally organised and enclosed settlement complemented the evidence provided by the lead beads for the participation of person(s) of some wealth and status in this process (Toolis 2007, 303; Appendix B).

A detailed examination of the stratigraphic sequence at Carghidown provided further insights into the history of the site (Ibid., 272 & 302-3). The roundhouse had originally been unenclosed, but the construction of the rampart and ditch was considered to have followed shortly after the laying of the clay yard, as loose spoil from the ramparts had spilled down onto its freshly laid clay surface, necessitating the building of a stone revetment along the inner face of the rampart to retain further slippage. A crucial observation was that this slippage overlay the clay yard surface but was itself

overlain by a thin clay surface laid over part of the secondary platform. The stratigraphic sequence of construction associated with the consolidation of the settlement was thus established, linking the various features into a sequence and showing how the settlement during its last phase of occupation was 'put together'.

Settlement closure

The duration of this final occupation phase was deemed very short and not only because the construction of features during this phase followed rapidly in succession. In comparison to ditch sections examined during earthwork experiments (Evans & Limbrey 1974, 178; Bell, Fowler & Hillson 1996, 234-235), the absence of much in the way of primary ditch fill at Carghidown demonstrated that the ditch was open for no more than a year or two before the rampart had entirely collapsed into the ditch (Toolis 2007, 303; Appendix B). As the specialist analysis of the soil micromorphology from the ditch fill demonstrated (Fouracre 2007, 294-6), the deposition of this material took place in one event. This was corroborated by the lack of organic material found within the ditch deposits, which suggested that the ditch was not open long enough for much primary silting to take place. The drystone masonry that sealed the ditch fill indicated that the collapse of the earth rampart had removed the stone wall that crowned it. This evidence was interpreted as suggesting an abrupt and complete collapse of the rampart rather than gradual disintegration, as the deposition of the earth bank and drystone wall within the ditch was not inverted or mixed together but formed discrete layers (Figure 6).

An abrupt closure was also inferred for the roundhouse, where the final alterations to the roundhouse had necessitated the breaking up of a large part of the slab floor to be reused as packing stones in several the post-holes but was not accompanied by the laying of a floor surface (Toolis 2007, 304; Appendix B). While a small part of the surrounding earth and rubble bank had collapsed over part of the interior of the roundhouse, there was no evidence for the deliberate infilling and blocking of post-holes, the ritual deposition of artefacts signifying closure or the levelling of structures, apparent on sites where planned abandonment is inferred (Nowakowski 2001, 141-45).

Since no floor surface was found in association with the last building phase within the roundhouse, it was surmised that the refurbishment or repair of the

roundhouse had been started but not finished. A platform for a second, larger roundhouse had been created but no further construction had followed. The clay yard had been laid but no evidence of its use was apparent. Taken together with the evidence for the sudden dismantlement of the rampart enclosing the site, it was concluded that the occupation of Carghidown had abruptly ceased *during* a phase of construction and consolidation of the internal structures (Toolis 2007, 304; Appendix B).

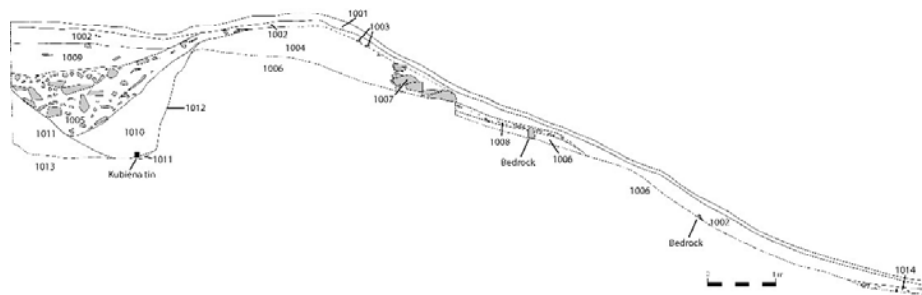


Figure 6: North-facing section of rampart and ditch

Local context

To better understand the context for the construction, occupation and closure of Carghidown, the immediate topography was examined. It was noted that its seemingly irrational and indefensible locale (Toolis 2003, 63; Appendix A) was shared by several other later prehistoric forts and brochs along the Galloway Coast (Toolis 2007, 303; Appendix B). The question was therefore raised as to why a settlement was established at this specific location.

The preference for either high ground or coastal margins for later prehistoric settlements across the wider topographical context in the Machars (Figure 7) was observed to owe more to the marginal nature of these sites in the modern landscape than any original settlement patterns (Toolis 2007, 305; Appendix B). The prominence of some fortified settlements in this landscape reflected a sufficient scale to have withstood generations of ploughing. As others had already surmised (Hunter 1994, 35), the large blanks in the surviving settlement pattern reflected more the nature of archaeological visibility than any true absence of settlement. This was corroborated by aerial surveys of the East Rhins, which have yielded many cropmarks indicating hitherto unknown settlement sites (Figure 7). It is argued that a similar pattern of unidentified plough-truncated remains probably exists in fertile areas of the Machars too.

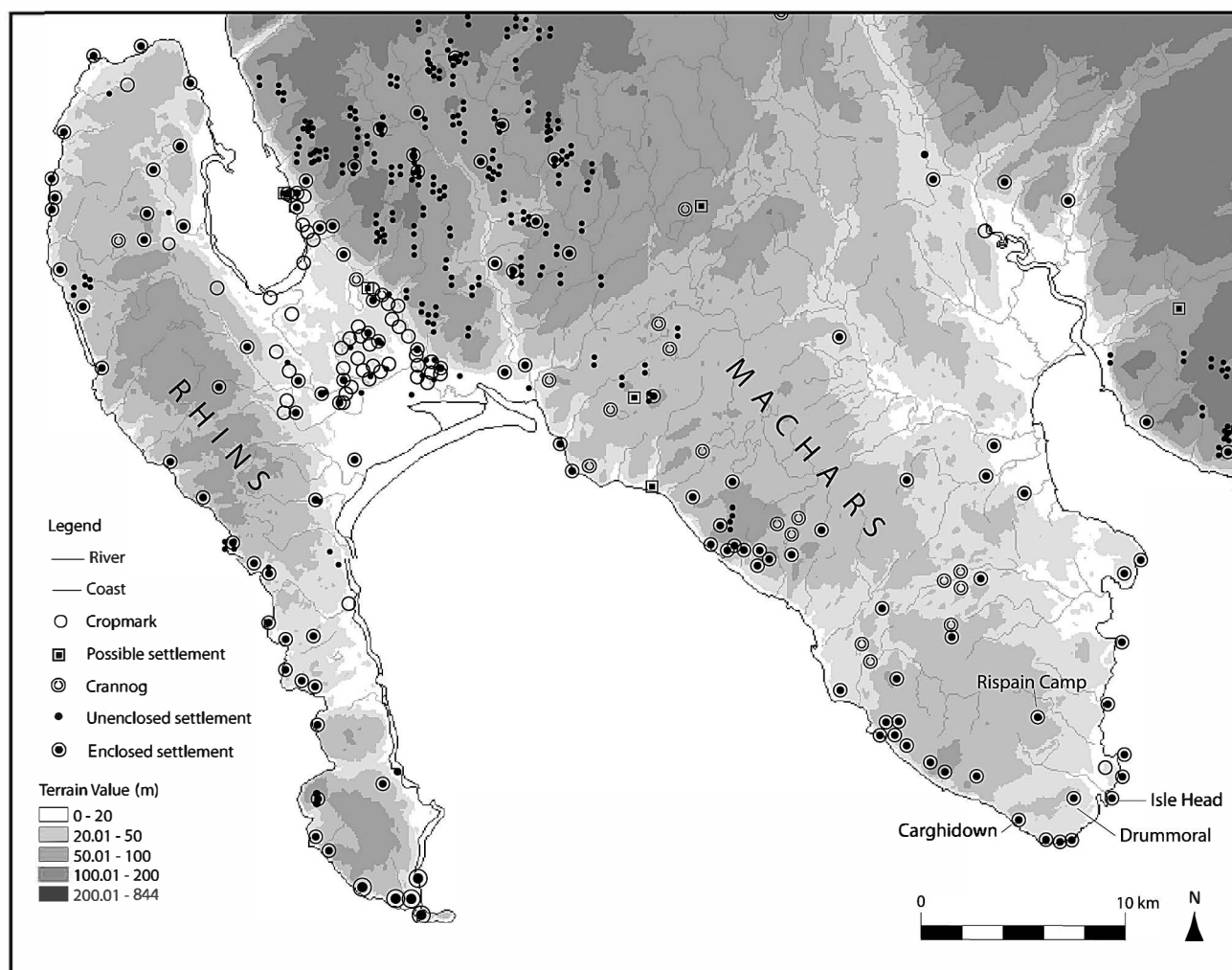


Figure 7: Later prehistoric settlement distribution in western Galloway

The implication of this is that contrary to a superficial appearance of the later prehistoric settlement distribution, Carghidown may have occupied a marginal location within the contemporary settlement pattern (Toolis 2007, 305; Appendix B).

An examination of the relationship of Carghidown to the contemporary local settlement pattern was then pursued. Comparisons and contrasts were drawn between the material culture and architecture of contemporary local sites (Ibid., 305-7). The rudimentary foundations for a local settlement network were thus established, comparable to settlement networks elsewhere in south-west Scotland comprising relatively large topographically pre-eminent settlements surrounded by smaller satellite settlements (RCAHMS 1997, 76-86; Halliday 2002, 100), though it is important to note that this local model, centred upon Castle O'er in Eskdale, is unsubstantiated by dating evidence for most of the surrounding sites (Banks 2002, 32). Local comparisons were further drawn between Carghidown's precarious but concealed location and its substantial but seemingly ineffectual defences, the case being made that this was a less than pre-eminent site within the local settlement hierarchy (Toolis 2007, 307-8; Appendix B). Given subsequent comparisons with the evidence for a hierarchy of sites of differential status within early medieval settlement patterns across Scotland (Toolis & Bowles 2016, 141-146 - Appendix D; Halliday 2006, 24), the writer is now inclined to view the local Iron Age settlement pattern more as a heterarchical network than a clear hierarchy.

The nature of the abandonment of Carghidown was also discussed to better understand Carghidown's place in the local settlement pattern. The slighting of the rampart and ditch, the premature halt to construction related to its re-occupation and the absence of any subsequent occupation, were considered to give the site's closure an air of deliberateness (Toolis 2007, 308; Appendix B). However, an explanation based on ritualistic closure was deemed unconvincing as the interior of the settlement showed no signs of actual acts of closure comparable to the deliberate destruction of the rampart. An alternative scenario of hostile coercion was examined, particularly in the context of evidence for contemporary conflict and the magnitude of resources required for the scale of destruction of contemporary sites (Ibid., 308-310).

Conclusions

The publication of the excavation and post-excavation results from Carghidown provided evidence for architectural traits, settlement layouts and cultural practices shared with other later prehistoric settlements in Dumfries and Galloway and elsewhere in Scotland. While additional funding may have enabled a more comprehensive excavation of the roundhouse, key stratigraphic relationships were identified enabling the development and closure of this site to be understood. Though there was little evidence recovered to distinguish this site from other forms of inland enclosed settlements or to exemplify any cultural aspect especially peculiar to Iron Age Galloway, the published report nevertheless exposed aspects of the later prehistoric settlement pattern in Galloway. Notably, potential reasons were explored that might explain the sporadic occupation of this site over a short period, the formal enclosure of the settlement only during the later stages of its occupation, and the abrupt nature of its abandonment a short period later. The case was made that deliberate planning lay behind the choice of location of Carghidown, the nature of its occupation and the nature of its abandonment too (*Ibid.*, 310).

Some of the hypotheses put forward here will be further developed in succeeding chapters; the development of layouts, internal organisation and enclosing defences of settlements, the identification of settlement patterns and hierarchies and refocusing regional and national cultural traits.

Chapter 5: Discussion of the findings from the excavation of Trusty's Hill Fort

Excavation strategy

Over one season of fieldwork in 2012, the writer led the excavation of Trusty's Hill. An interim summary report was published in the Transactions of the Dumfriesshire and Galloway Natural History and Antiquarian Society (Toolis & Bowles 2013; Appendix C), while the final report was published by Oxbow Books (Toolis & Bowles 2016; Appendix D).

Trusty's Hill Fort rests on the summit of a craggy knoll within the Stewartry district of Galloway. While it is not the most prominent summit of the Boreland Hills, south-west of Gatehouse of Fleet (Figure 8), it affords wide views over the Fleet valley. The fort is defined by a vitrified rampart around the summit of the hill, enclosing an area of 0.0437 ha, with an outer bank and rock-cut ditch on its northern side and a series of lesser outer ramparts on its southern side.

Trusty's Hill was selected for excavation due to its similarity to several small sub-rectangular forts distributed across Galloway, singled out by Feachem as a distinctive regional site-type (1966, 76; see Chapter 2) and its unusual attribute of Pictish Carvings, which are unique within Galloway. These comprise of double disc/z-rod and S-dragon/sword symbols inscribed upon an exposed face of greywacke bedrock at the entrance to the fort's summit. While this project's publications were co-authored with Christopher Bowles, the writer was the principal project leader, excavation director and author. The principal aim of the research design was to establish an archaeological context for the Pictish Carvings at Trusty's Hill. The 2012 excavation was initiated with a topographic GPS survey to record in 3D the surface features (Figure 9). Scheduled monument consent had been granted only for the re-excavation of trenches undertaken in 1960 (Thomas 1961). While this was less extensive than originally planned, it nevertheless allowed for the investigation of several constituent parts of the site (east and west sides of the interior summit, the rock-cut basin at south-east entranceway opposite the Pictish Carvings, and the rock cut ditch at the northern extremity of the site). The re-excavation of Thomas' trenches revealed that he had not fully excavated the archaeological deposits within these trenches.

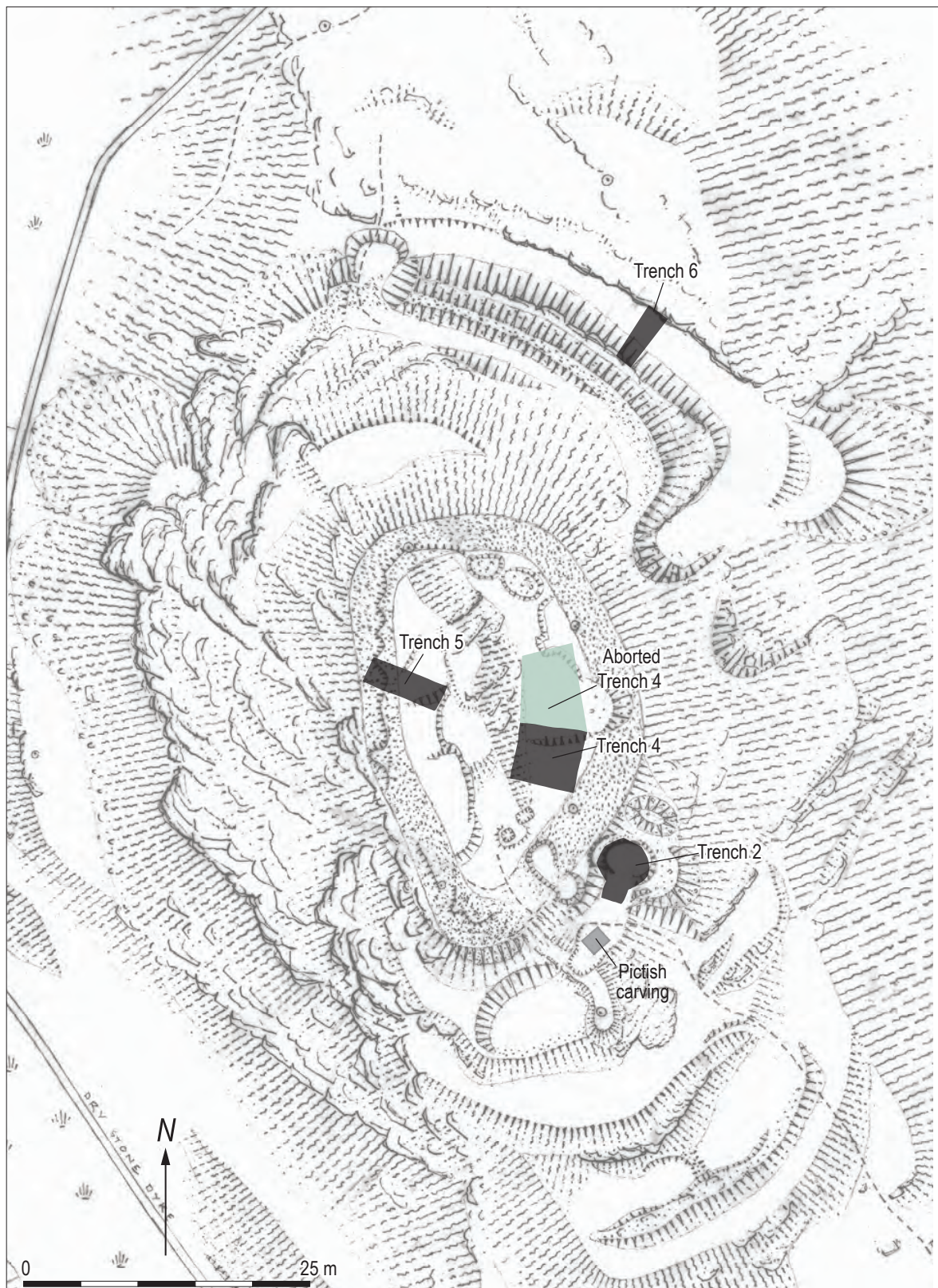


Figure 9: Site Plan of Trusty's Hill

Deeper excavation to modern standards recovered a much greater artefact and archaeobotanical assemblage than Charles Thomas' undertaking had achieved. His findings were integrated with the new results and a secure stratigraphic sequence of archaeological contexts established. Laser scanning was also deployed immediately after the excavation to record in minute detail the Pictish Symbols at Trusty's Hill (Figure 10). The resulting assemblages and data were thoroughly examined by specialists in a programme of post-excavation analyses set out in a Post-Excavation Research Design in compliance with scheduled monument consent.

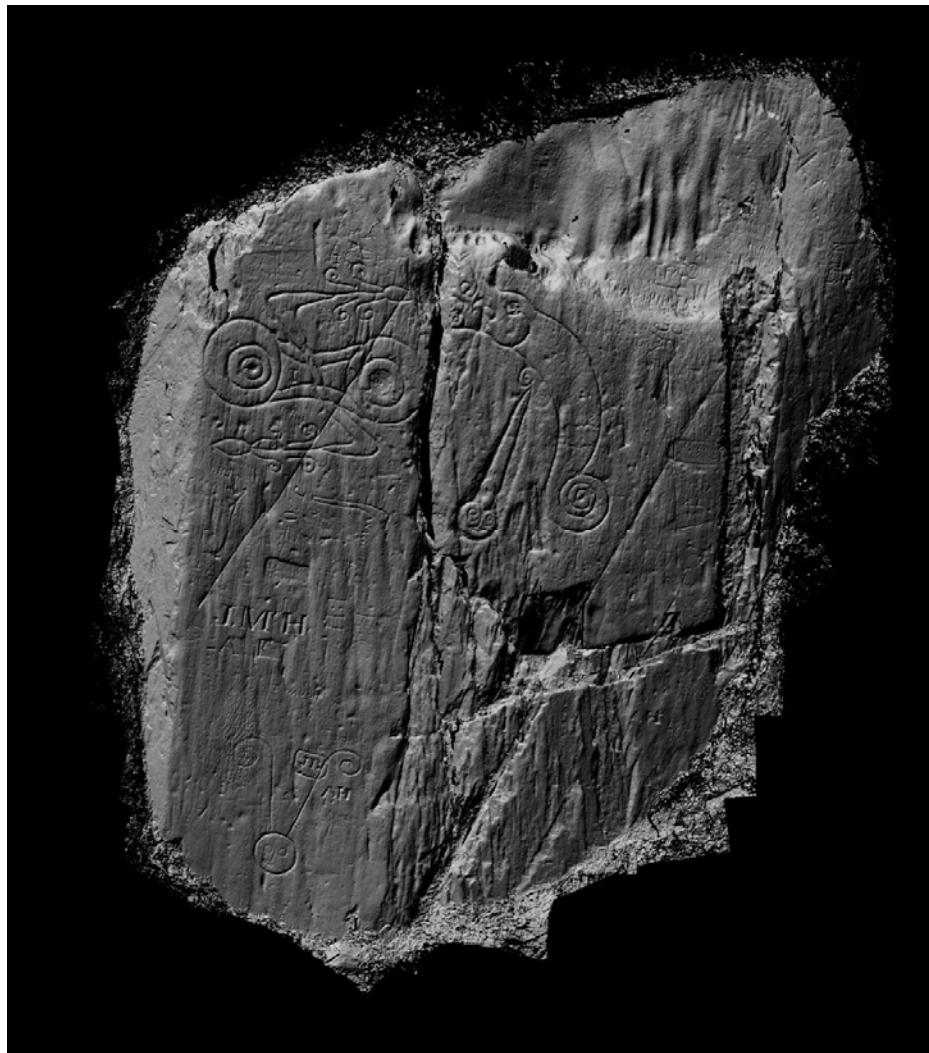


Figure 10: Laser scan survey of inscribed stone at Trusty's Hill

The writer was the principal author of the interim summary report (Appendix C). The draft report was then amended by the co-author until a final mutually agreeable version was produced. For the book (Appendix D), the writer wrote chapters 1 and 2. This was followed by the separate reports prepared by the

various specialist contributors, which were co-ordinated and drawn together by the writer into the relevant chapters (3-6). The accumulated results of the excavation and specialist analyses were then examined within the wider local, regional and national context in a discussion chapter prepared by the writer and co-author. The structure to chapter 7 was first agreed between the author and co-author, each selecting specific sections to write. The writer was the principal author of the sections on stratigraphy and chronology, layout, nuclear fort, vitrified rampart and royal stronghold while the economy and culture sections were prepared principally by the co-author. Each section was reread and amended by the other to achieve a final draft that was mutually acceptable. The conclusions, set out in chapter 8 of the book, were initially written by the writer, and then amended by the co-author and writer until a final mutually agreeable draft was produced.

Interim summary of Trusty's Hill excavation

The summary report (Appendix C) provided the interim results relatively soon after the completion of fieldwork and sought to emulate the promptness of Charles Thomas' report of his 1960 excavation (1961, 58). Preceding the completion of all specialist analyses, this report focused on the stratigraphy and chronology of the excavated archaeological deposits with a brief discussion of the material culture (Toolis & Bowles 2013, 32-44; Appendix C). Comparisons between the evidence recovered from Trusty's Hill and other early medieval sites across Scotland began to be drawn, concluding with the recognition that the archaeological record of Trusty's Hill suggested that it was an early medieval royal site potentially associated with the kingdom of Rheged (Ibid., 44-47).

The stratigraphy and chronology of Trusty's Hill

The final report (Appendix D) provided a comprehensively detailed record of the archaeological evidence and analyses that could then be more thoroughly examined. To define the archaeological context, the reasons - a combination of resources, methodology and circumstance – for why the 2012 excavation recovered so much more than the 1960 excavation were discussed (Toolis & Bowles 2016, 103-104; Appendix D). Of crucial significance was the recognition that the same sequence of stratified deposits survived on both the eastern and western sides of the summit, in trenches 4 and 5 respectively (Ibid. 36 & 104; Figure 11). This consistent stratigraphy thus shed light upon occupation *across* the summit rather than

simply recording localised deposition and provided securely stratified archaeological contexts for the vast bulk of the artefact assemblage. However, given the constraints of scheduled monument consent there was little scope for exposing actual structures or buildings, which a larger excavation may have achieved.

Examination of the chronological evidence determined that residual traces of occupation dating to around 400 BC survived on the summit. However, this episode appears to have been followed by a hiatus of some centuries, as no further occupation was evident until the late fifth-early sixth centuries AD when the hill was re-occupied and subsequently fortified (Ibid., 104-105). The stratigraphic sequence evident at both the east and western sides of the summit demonstrated that these occupation deposits were overlain by the collapsed rampart faces which were then overlain by a dark soil deposit from which most of the artefacts were recovered. Analysis of the soil micromorphology indicated that this dark soil deposit, and therefore by implication the artefacts it contained, had been trampled in during a prolonged phase of destruction prior to the firing, vitrification and collapse of the rampart core (Ibid., 105). While the deposition of the artefacts therefore occurred during the destruction of the summit, these objects derived from the occupation of the summit immediately prior to its immolation.

Those artefacts that could be fixed chronologically, such as the E-Ware sherd and the decorated metalwork, consistently date to between the late sixth and early seventh centuries AD. Refining the span offered by the radiocarbon dating results alone, analysis of the stratigraphy and datable finds suggest that the fortification of the summit probably took place in the later sixth century AD with subsequent destruction during the first quarter of the seventh century AD (Ibid.).

Radiocarbon dating of the primary fill of the rock-cut basin, which flanked the entranceway to the summit, indicated its use between the late seventh and late eighth century AD. However, contrary to the inference that this feature therefore originated after the destruction of the summit rampart above, attention was drawn to the stratigraphic relationship between the horn-work defining the entranceway to the summit and a stone revetment defining the edge of this rock-cut basin (Ibid.). This stratigraphic sequence demonstrated that the rock-cut basin pre-dated the horn-work defining the north-east side of the summit entranceway while radiocarbon and historical evidence for later

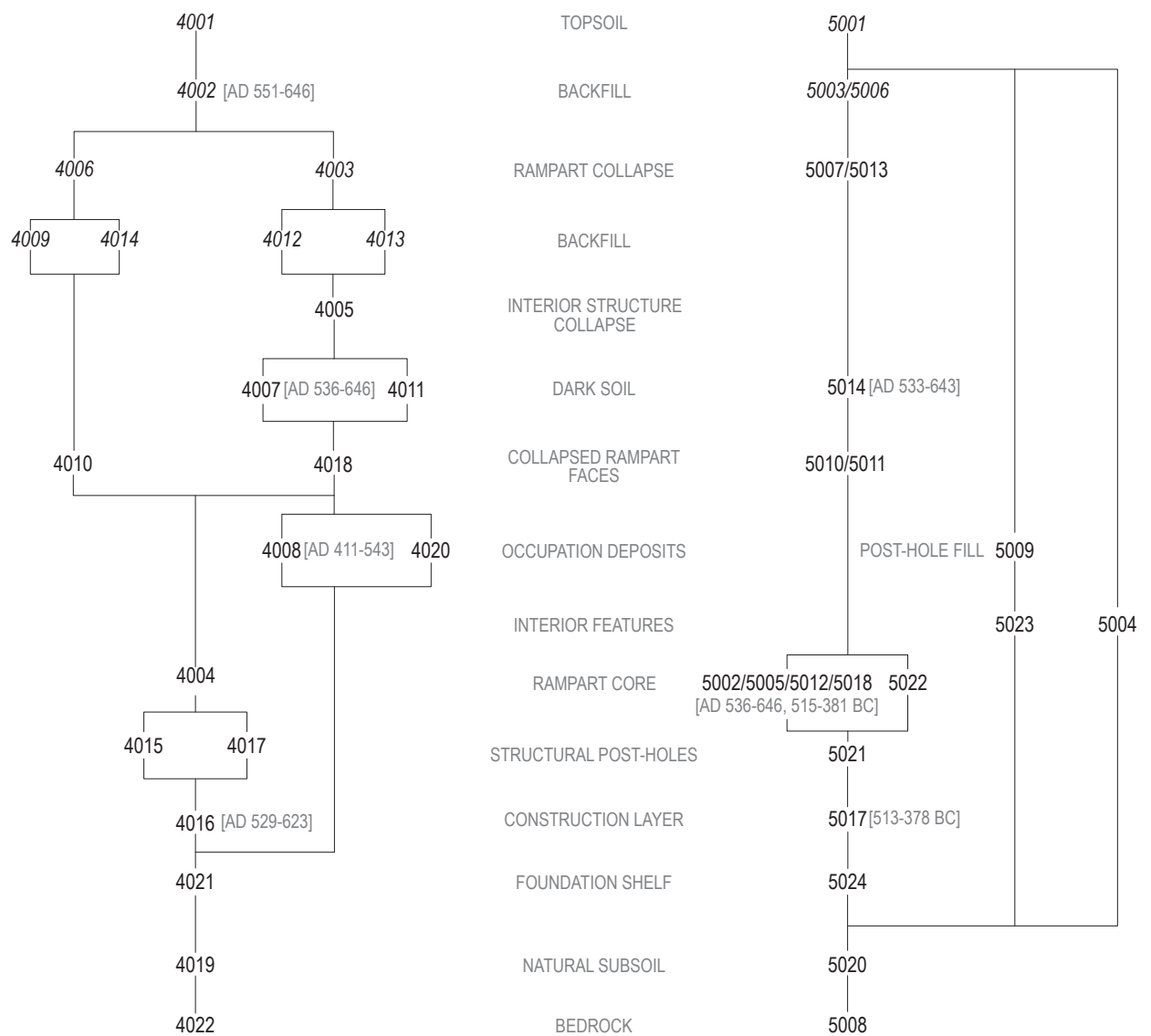


Figure 11: Combined Harris matrices incorporating calibrated (2-sigma) radiocarbon dates for the stratified sequence of contexts in Trenches 4 & 5

votive use of this feature (Gordon 1794, 351) demonstrated the continued use of the rock-cut basin after the destruction of the fort (Toolis & Bowles 2016, 105; Appendix D).

The hillfort layout

The topographic survey demonstrated that Trusty's Hill comprised a fortified citadel around the summit of a craggy hill, with several lesser enclosures looping out along lower-lying terraces and crags (Figure 12), a layout that accords with previous definitions of nucleated forts (Stevenson 1949, 190-1; Alcock et al. 1989, 206). However, in common with many such excavations of nucleated forts, which have also tended to comprise only keyhole trenches (Ibid. 193; Alcock & Alcock 1990, 104; Lane & Campbell 2000, 13), very little evidence for architectural structures was revealed within the site's interior. Nevertheless, the material assemblage indicated craft activities, particularly a range of metalworking, and domestic occupation consistent with other early medieval nucleated forts and other high-status sites in Scotland (Toolis & Bowles 2016, 105-7; Appendix D).

In contemplating the internal layout of the settlement, it was observed that a ridge separated the upper plateau on the western side of the summit from a lower shelf along the eastern edge (Figure 12). Whether these two areas were discrete platforms for structures or outdoor activities is impossible to establish until a much more extensive excavation is undertaken but the presence of timber post-set buildings on the western summit area was tentatively suggested by the identification of two rock-cut features (Toolis & Bowles 2016, 24 & 107; Appendix D). It was further observed that the dimensions of the western plateau were sufficiently large to have contained a rectilinear hall comparable to early medieval examples at the Mote of Mark, Lockerbie, Cruggleton Castle and Rhynie (Laing & Longley 2006, 171; Kirby 2011, 47-53; Ewart 1985, 16-20; Noble et al. 2013, 1142). Within the lower eastern shelf of the summit was the rubble collapse of a dry-stone wall that may have separated the upper area from this shelf. The evidence for metalworking was predominantly recovered from this lower area and while this may simply reflect the larger excavation trench here, it is possible that this lower shelf was used as a workshop. Interestingly, the vertically set slabs of a three-sided structure were evident here (Toolis & Bowles 2016, Fig. 1.8 & 2.5; Appendix D); it recalls the three-sided structure associated with metalworking at the Mote of Mark (Laing & Longley 2006, 19).



Figure 12: Nucleated Fort layout of Trusty's Hill

It was postulated that the inhabitants may have chosen to differentiate domestic and industrial zones of the summit in a similar manner to the Mote of Mark (Ibid., 15 & 20).

As with the Mote of Mark, the constricted area of the summit suggests that the settlement at Trusty's Hill was a single household settlement, not a multiple household settlement; an estate centre rather than a village (Toolis & Bowles 2016, 107; Appendix D).

The archaeological remains of the vitrified rampart enclosing the summit were comprehensively examined to reconstruct the original width (2.3 m) and composition of the rampart – a timber-framed drystone rubble core faced on both sides with large stone slabs (Ibid., 107-8). It was observed that only the rubble core of the rampart had been vitrified and that the carbonised remains indicated an internal timber structure, incorporating oak uprights and wattle walling. This interpretation was supported by the large upright post-voids encountered within the rubble core (Ibid., 17) measuring 1.6 m apart, the same distance as noted between the small scoops surveyed along the north-west side of the summit rampart (Figure 9). This regularity indicates that the timber structure within the wall-core exposed in the excavated trenches could be applied to the remainder of the unexcavated rampart. Furthermore, the width of the rubble core of the rampart also measured 1.6 m (Toolis & Bowles 2016, 108; Appendix D), not so different from the 1.4 m spacing between the horizontal beams observed in the rampart at Dumbarton Rock, which was also about 2 m in full width (Alcock & Alcock 1990, 110 & 112). While these measurements broadly correspond to the Roman passus (five Roman feet, or about 1.5 m) they do not correlate with other contemporary sites such as the Mote of Mark, Dunadd or Dundurn (Laing & Longley 2006, 8; Lane & Campbell 2000, 50; Alcock et al. 1989, 202), perhaps pointing to competing traditions of measurement and rampart construction across Scotland (Toolis & Bowles 2016, 108; Appendix D).

The defensive qualities of the ramparts and ditches enclosing Trusty's Hill including associated slingstones were noted (Ibid.) but attention was also drawn to a not altogether contradictory aspect of ostentatious display that was a significant trait of the timber-framed rampart. The copious amounts of mature timber required, indicated a substantial outlay in both human and material resources (Ibid. 109). This implies considerable resources to hand by and from which such timber could be extracted. Research elsewhere in

Scotland suggests that the control and conspicuous consumption of timber resources was an exercise of power as much as practicalities (Tipping et. al. 2006, 41). A contrast can also be drawn between the relative ubiquity of timber Iron Age architecture and the scarcity of timber settlement structures from the third century AD onwards. This may not only reflect the depletion of available timber resources and resultant use of less archaeologically visible materials but also the increasingly restricted control of timber resources in the hands of an elite, demonstrated by comparisons between high status and low status early medieval settlements in north-east Scotland (Noble et al. 2013, 1142; Carver et al. 2012, 184; Strachan & Sneddon 2012, 154). Comparisons between the use of timber in modest and high status early medieval settlements in south-west Scotland were also drawn (Hill 1997, 70; Cook 2002, 77; Crone 2000, 162-5; Laing & Longley 2006, 171; Kirby 2011, 47-54) suggesting that social customs in addition to purely economic factors played a crucial role in settlement architecture (Toolis & Bowles 2016, 109; Appendix D). The interaction between the social and economic status of the inhabitants was further examined, including evidence from the previous excavation (Thomas 1961, 61-62). It was advanced that the outer enclosures flanking the south-eastern approach were used for the ostentatious display of livestock (Toolis & Bowles 2016, 109; Appendix D), analogous with the public exhibition of agricultural wealth at hillforts elsewhere (Waddell 2014, 142).

The rock-cut basin was examined, particularly in terms of its location opposite the Pictish carvings, its form and stratigraphic relationship with the entranceway architecture and its cultural connotations (Toolis & Bowles 2016, 110; Appendix D). Parallels were drawn with similar features at Burghead in Moray and Dunadd in Argyll to argue for a ceremonial purpose related to the inscribed stone on the opposite side of the entranceway (Ibid., 110-111).

Nucleated fort

As already noted above, Trusty's Hill conforms to the definition of a nucleated fort, a type of elite secular settlement that emerged in Scotland during the early medieval period. The fortified summit, from which the bulk of material culture was recovered, is envisaged as the nucleus of the settlement, with the outlying enclosed areas on the south and northern slope of the summit representing ancillary zones of activity and occupation. The evidence

gathered from the 2012 survey and excavation confirms what had long been tentatively suggested (Thomas 1961, 67; Harding 2004, 209) and enabled similarities and contrasts to be drawn out from the chronology of other nucleated forts (Toolis & Bowles 2016, 111; Appendix D). The significance of Trusty's Hill is that it may preserve the arrested development of an early version of a nucleated fort, specifically one that did not accrue subsequent accretions over later centuries but which in the late sixth - early seventh centuries AD was similar in size to contemporary nucleated forts such as Dunadd (Figure 13).

In re-examining Charles Thomas' sequence of two chronologically separate phases of fortification (1961, 67), the writer concluded that the additional enclosing works were more convincing as a unitary system of fortification of the site deriving from the narrow period between the construction and destruction of the timber-laced summit rampart in the decades around AD 600 (Toolis & Bowles 2016, 113; Appendix D). While there may have been an element of gradual accretion of the various outworks to the final layout, the author was not convinced that any feature, other than the rock-cut basin, pre-dated the summit rampart which itself probably replaced an earlier Iron Age enclosing boundary of some form.

A local context for the development of complex systems of fortification in late Iron Age and early medieval Galloway was examined, particularly the morphological similarities of Trusty's Hill to previously defined 'courtyard forts', nucleated forts and vitrified forts in the local Stewartry district (Truckell 1963, 94-95; Feachem 1977, 129-131; Figure 13). Given these similarities and the dissimilarities between Trusty's Hill and most other vitrified forts in Wigtownshire and Dumfriesshire, the closely comparative dating evidence from the Mote of Mark (Laing & Longley 2006, 24), the only other local vitrified fort to have been excavated, suggests that the other vitrified and nucleated forts in the Stewartry may be contemporary and evident of a settlement hierarchy in early medieval Galloway (Toolis & Bowles 2016, 113-114; Appendix D). This will be further examined in Chapter 7.

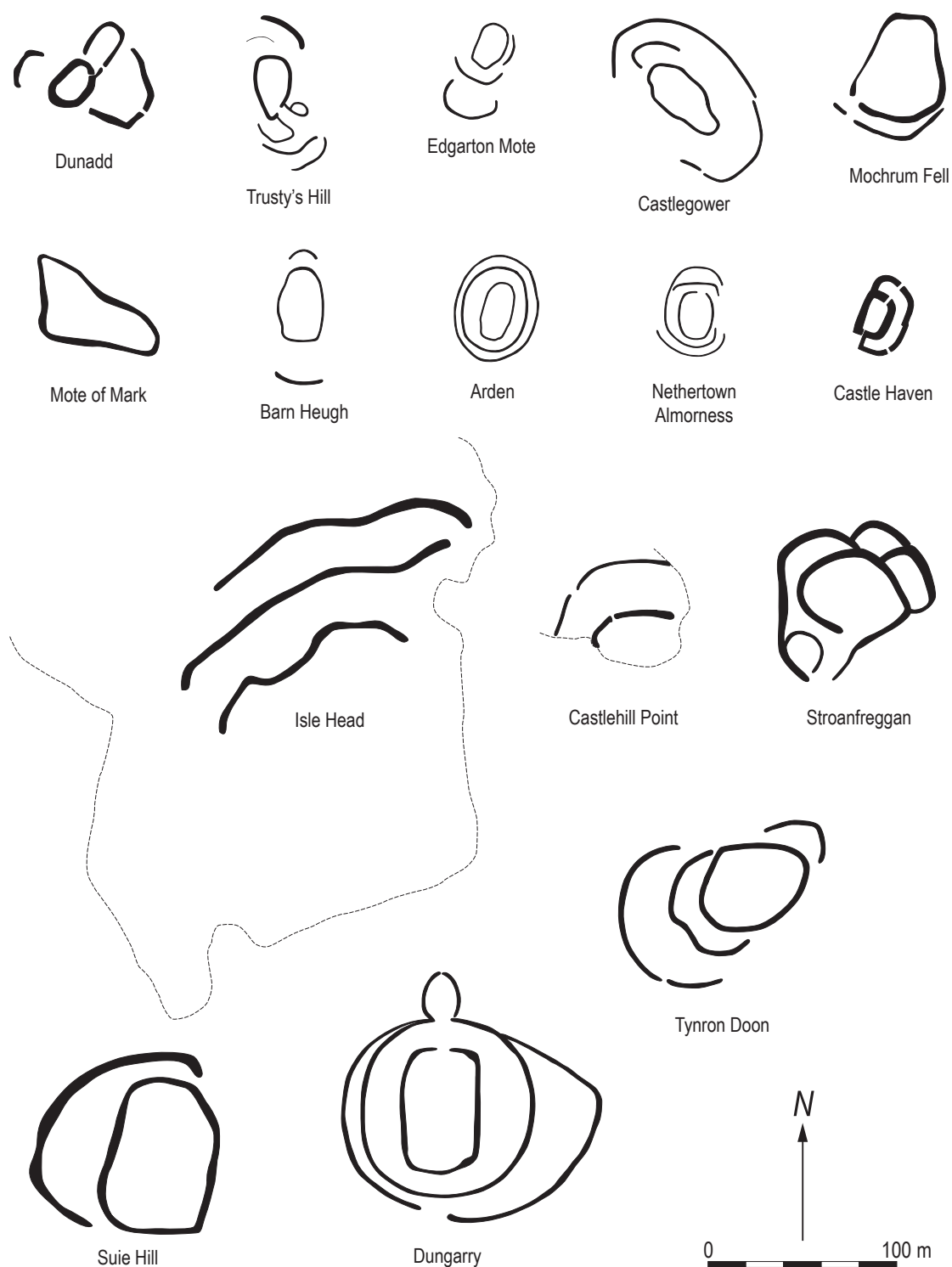


Figure 13: Comparative plans of the late sixth - early seventh centuries phases of the nucleated forts at Dunadd and Trusty's Hill, together with comparative plans of courtyard, nucleated and other potential early medieval forts in Galloway.

The hillfort economy and culture

While this section was primarily written by the book's co-author, a summary of the significance of the material culture of Trusty's Hill is crucial to understanding the site. While little more than 1% of the site was excavated, the quality of the assemblage of artefacts and environmental remains was sufficient to demonstrate that its household shared the same agricultural economy and access to natural resources as other high-status settlements in Scotland (Ibid., 115-120). Notable amongst this evidence were the results of lead isotope analysis of the lead ingot, which indicates lead mining in the Southern Uplands, supporting the evidence from Carghidown (Pashley & Evans 2016, 49-50).

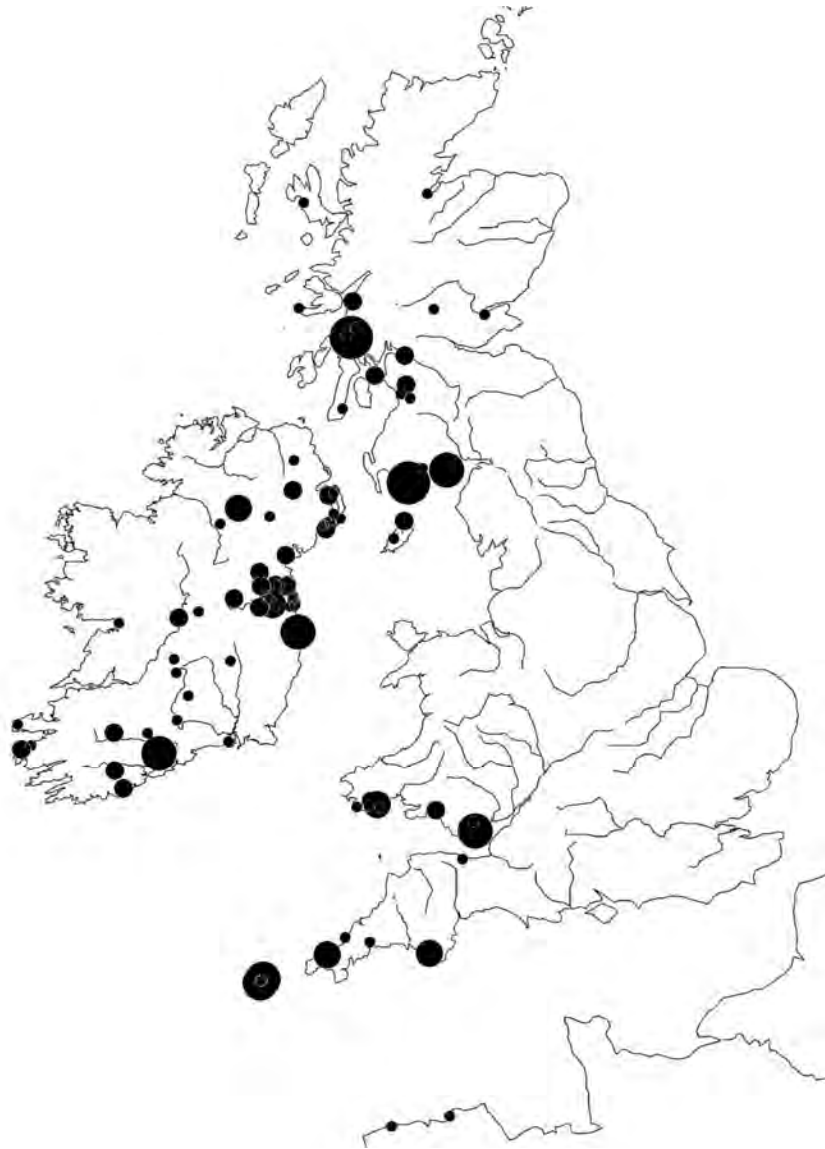


Figure 14: Distribution of E ware (size of symbol proportional to number of vessels)

There was a variety of evidence for metalworking recovered; the on-site smelting of iron, which is a comparatively rare occurrence amongst later prehistoric and early medieval sites, demonstrated that the workshop here was a centre for production rather than simply for mending items, while XRF analysis of the various ceramic debris demonstrated the working of leaded bronze, silver and gold (Toolis & Bowles 2016, 120-124; Appendix D).

Jewellery itself was recovered including a finely worked iron thistle-headed pin; it was observed that examples conforming to this shape of pin have been recovered from nearly all contemporary high-status settlements in south-west Scotland (Ibid. 125). A close comparison was drawn with the metalworking and metalwork from the Mote of Mark, including drawing attention to a dragonsque creature depicted on a mould from this site that provides possible source material for the S-dragon carved on to the rock outcrop at Trusty's Hill (Ibid. 124).

A sherd of E ware imported from western France was recognised as a strong indicator of the status of the Trusty's Hill household linking it with the same elite redistribution network that connected many royal and monastic sites of Western Britain and Ireland and which specifically targeted the Galloway coast (Ibid. 39 & 128; Figure 14). Altogether, the material assemblage recovered from Trusty's Hill demonstrates that the household here was of the highest echelon of the social hierarchy of early medieval Scotland with the same powers of patronage and connections evident at other royal sites (Ibid. 121-132). Indeed, it was argued that the economic, social and cultural prowess of the household may have been inextricably linked to the nature of its demise.

The vitrified rampart

The vitrified rampart at Trusty's Hill consistently upheld previous observations about the character, method and function of vitrification of timber-laced ramparts; that this was a deliberate and prolonged method of destruction undertaken after the site had been captured (Ibid. 132-133). An alternative explanation for self-inflicted ritualised abandonment (Bowden & McOmish 1987, 79) was rejected on the basis that this is inconsistent with the repeated references to the besieging and destruction of forts by fire that begin to be recorded in a variety of annals from the seventh century AD onwards (Graham 1953, 72; Thomas 1961, 70; Alcock 1988, 31) and the consensus that vitrified ramparts are the result of punitive destruction after

the capture and pillaging of a hillfort, in order to permanently raze it in a spectacular exhibition of power (Childe & Thorneycroft 1938, 55; Nisbet 1974, 4-5; MacKie 1976, 206-210; Ralston 1986, 38; Close-Brooks 1986, 132; Audouze & Büchsenschütz 1991, 97; Armit 1997, 59; Harding 2004, 87; Ralston 2006, 163; Harding 2012, 189). While the concept of deliberate constructional vitrification has been renewed recently (Wadsworth et al. 2016), this explanation can be discounted for Trusty's Hill because the internal and external slab faces of the rampart were entirely unburnt and had collapsed prior to the firing of the rubble core, which was the only part of the rampart that had vitrified. Furthermore, though vitrification may result in strengthening, in effect bonding rubble together (Ibid., 11-12), it only achieves this at the expense of the height, perpendicular form and stability of the rampart, as evidenced at Trusty's Hill where the rubble core had collapsed both across the exterior and interior of the summit (Toolis & Bowles 2016, 21; Appendix D). Owing to the material wealth and connections of the household and the sustained effort, wide visibility and historical context for its destruction, the vitrification of the rampart core was not just a wanton act, but a political statement, probably during the conquest of south-west Scotland by the northern Anglian kings in the seventh century AD (Ibid., 133-134).

A royal stronghold

Given the demise of material wealth and status that the destruction of Trusty's Hill comprised, the writer, in considering the political need for the execution of such dramatic action, questioned whether this hillfort was merely the fortified settlement of local nobility or if it was the seat of power of a king. To address this, comparison was undertaken with other contemporary high-status sites across Britain and Ireland (Table 2).

Contrasts and comparisons to Trusty's Hill were undertaken particularly with secular settlements in Scotland such as Buiston Crannog, Mote of Mark and Dunadd (Crone 2000, 64-66 & 144-166; Laing & Longley 2006, 170-179; Lane & Campbell 2000, 204-211) examining material wealth and culture, social roles of patronage and clientship, morphology and hierarchical layouts, and comparative scales of excavation (Toolis & Bowles 2016, 135-137; Appendix D). The closest comparison was drawn with Dunadd in Argyll and not only in relation to the range of the material assemblage.

Site	Imports (pottery /glass)	Defended/ enclosed	Gold/ Silver	Fine jewellery production	Weapons	R o y a l
<i>Dumfries & Galloway</i>						
Trusty's Hill	Cont.	▪	▪	▪	▪	▪
Mote of Mark	Cont.	▪	▪	▪	▪	
Tynron Doon		▪	▪			
Whithorn	Cont. Med.		▪			
<i>Scotland</i>						
Dunadd	Cont.	▪	▪	▪	▪	▪
Dumbarton Rock	Cont. Med.	▪		▪	▪	▪
Edinburgh Castle Rock		▪			▪	▪
Rhynie	Cont. Med.	▪		▪		▪
Clatchard Craig	Cont.	▪	▪	▪		
Buiston Crannog	Cont.	▪	▪		▪	
<i>Ireland</i>						
Clogher	Cont. Med.	▪	▪	▪		▪
Lagore	Cont.	▪	▪	▪	▪	▪
Garranes	Cont. Med.	▪		▪		▪
Garryduff	Cont.	▪	▪	▪	▪	
<i>Wales</i>						
Dinas Powys	Cont. Med.	▪	▪	▪	▪	▪
Longbury	Cont. Med.		▪	▪		
<i>SW England</i>						
Cadbury Congresbury	Med.	▪	▪	▪		
Cadbury Castle	Med.	▪				
Tintagel	Med.	▪				

Table 2: Summary of key indicators of status of fifth-seventh century sites in Celtic Britain and Ireland (Adapted from Campbell 1996, 85). Cont.: continental; Med.: Mediterranean

Comparison was also drawn between Trusty's Hill and Dunadd in terms of the equivalent scales of nucleated fort layout during the late sixth and seventh centuries AD (Figure 13) and the immediate context of the carved stone outcrops at each site (Toolis & Bowles 2016, 136-137; Appendix D). Coincidence was considered inadequate to explain the combination at both sites that display inscribed rock outcrops with rock-cut basins, within deliberately demarcated entranceways to the summit. The two are not identical however, not least the absence of a carved footprint at Trusty's Hill,

which at Dunadd, based on analogy from Irish historical evidence, led its excavators to suggest that this with its associated carvings within a ritualised entranceway served a role in the inauguration of kings (Lane & Campbell 2000, 13 & 250-251).

Nevertheless, the association of early medieval royal sites and regalia and Pictish inscriptions was examined to assess if a similar royal inauguration role could be applied to the summit entranceway at Trusty's Hill (Toolis & Bowles 2016, 136-141; Appendix D). The location of the only other known Pictish inscribed stone outwith Pictland, at the foot of Edinburgh Castle Rock, while not in its original location, was considered a little more than coincidence given the widely accepted recognition of Edinburgh Castle Rock to be a royal stronghold during the sixth-seventh centuries AD (Driscoll & Yeoman 1997, 29, 43-45 & 227; Koch 1997, xiii-xiv; Clancy 1998, 46). Another comparison was made with the early sixth century Pictish royal site at Rhynie in Aberdeenshire, recent excavation of which has yielded comparable material culture and revealed that the Craw Stane, which depicts a single pair of fish and Pictish beast incised symbols, stood at one of the entranceways to a timber enclosure that was burnt to the ground no later than the middle of the sixth century AD (Noble et al. 2013, 1142; Noble et al. 2018, 1339).

The similarities and dissimilarities between Trusty's Hill, Dunadd, Edinburgh Castle and Rhynie suggest they are independent responses to analogous political circumstances but created within local contexts (Toolis & Bowles 2016, 138; Appendix D). Without the carved footprint, the key feature at Dunadd that directly relates to inauguration rites, together with the historical evidence for Dunadd and the role of footprints and shoes in the inauguration of chiefs and kings in Gaelic Ireland and Scotland during the middle ages (Lane & Campbell 2000, 247-249), it is doubtful that the rock-cut bowl and Pictish symbol there would be recognised as related in any way to royal inauguration. The juxtaposition of these features at Dunadd, however, suggest that they functioned as a group and were read together as such (Ibid., 249). The precise meaning or function of the Pictish symbols at all four sites is unknown but they appear to represent the paraphernalia of royal investiture (Toolis & Bowles 2016, 138; Appendix D).

The accumulated body of archaeological evidence from Trusty's Hill meets each of the various archaeological premises that one might expect a royal site of this era to meet (Table 2; Toolis & Bowles 2016, 135-141; Appendix

D). In examining this evidence, the author rejected the late seventh-ninth century date attributed to the Pictish inscription at Trusty's Hill based purely on art-historical analysis (Forsyth & Thickpenny 2016, 101), because the immediate archaeological context of the Pictish carvings - the demarcation of the entranceway to the hilltop citadel - dated to no later than the early seventh century AD. It is also difficult to envisage a credible historical and political context, after the establishment of Northumbrian hegemony during the seventh century, for the appropriation of Pictish symbols in a manner that is only apparent at significant royal sites elsewhere in Scotland (Toolis & Bowles 2016, 140; Appendix D). The consideration of a date around AD 600 is further borne out by a revised chronology for Pictish Symbols based on new archaeological evidence from sites in north-east Scotland such as Dunnicaer, Rhynie, Pool and Dairy Park. These indicate an origin for Pictish carvings in the third or fourth centuries AD and development of more elaborate symbols thereafter, much earlier than art-historical analysis has previously suggested (Noble et al. 2018, 1341). Notwithstanding the independent expressions behind the carvings at Trusty's Hill, Dunadd, Edinburgh and Rhynie, the secure dating evidence for high status occupation at all four sites provides some measure of relative chronology for their inscribed symbols (Toolis & Bowles 2016, 138; Appendix D). However, unlike other early medieval kingdoms where the chief settlement is known - Dunadd for Dalriada, Din Eidyn/Edinburgh for Gododdin, Alt Clut/Dumbarton Rock for Clut/Clyde and Din Guaire/Bamburgh for Bernicia, there are no historically attested sixth-seventh century royal sites for the Solway region. However, the lack of an historical record does not negate the potential for the archaeological record to illuminate the local and regional context of such a royal centre (Figure 15).

Previous excavations, sampling and surveys of several sites in Galloway including Mote of Mark, Tynron Doon, Whithorn, Ardwall Isle and Kirkmadrine suggest a hierarchy of early medieval secular and ecclesiastical settlements across the region (Toolis & Bowles 2016, 143-145; Appendix D). It was therefore examined if this complex hierarchical settlement pattern can be equated with a putative kingdom, particularly the elusive kingdom of Rheged that Galloway has commonly been considered to lie within (Williams & Williams 1968, xxxviii; Laing & Longley 2006, 160-161; McCarthy 2002, 371; Harding 2004, 206).

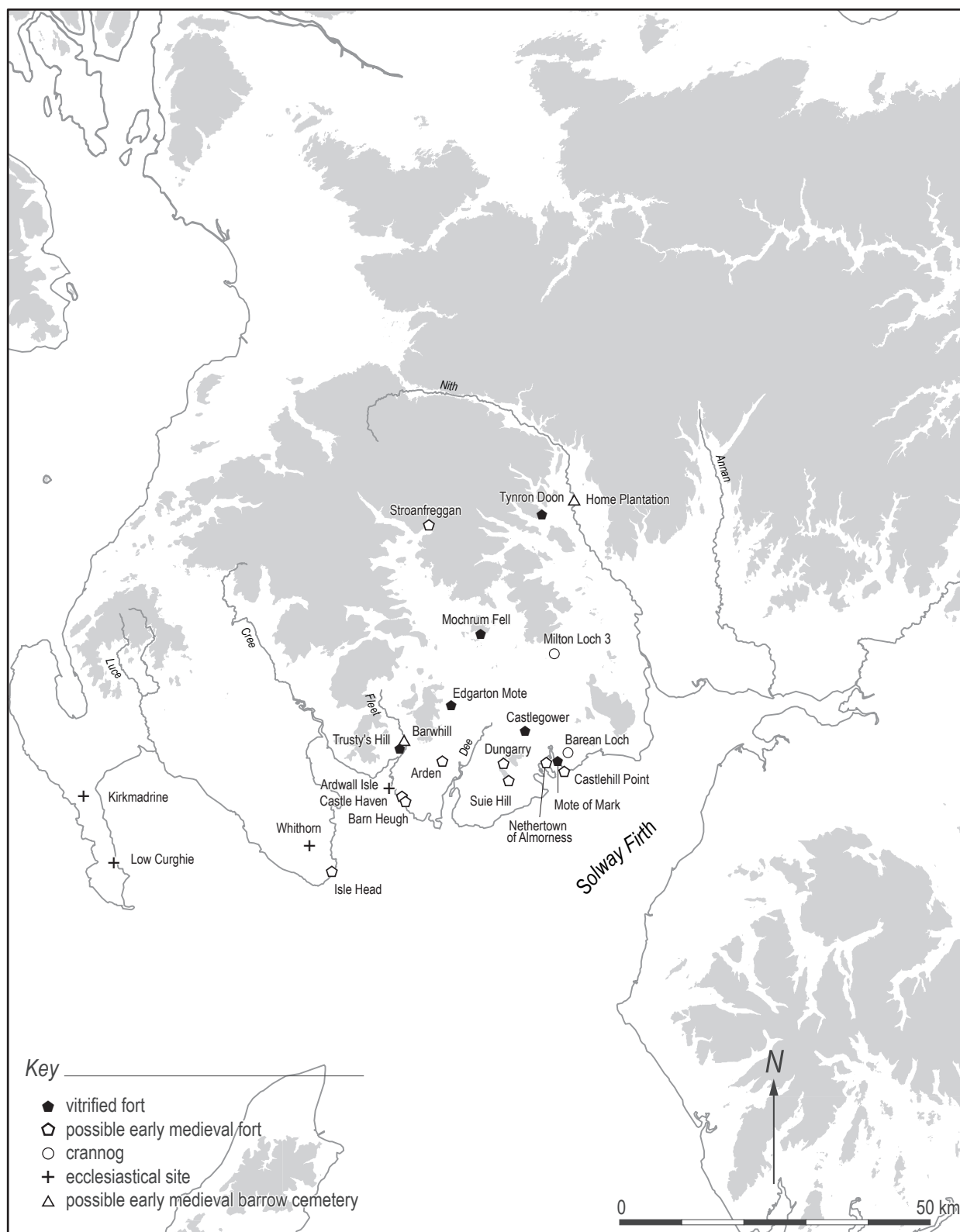


Figure 15: Map of potentially contemporary sixth and early seventh century sites in Galloway

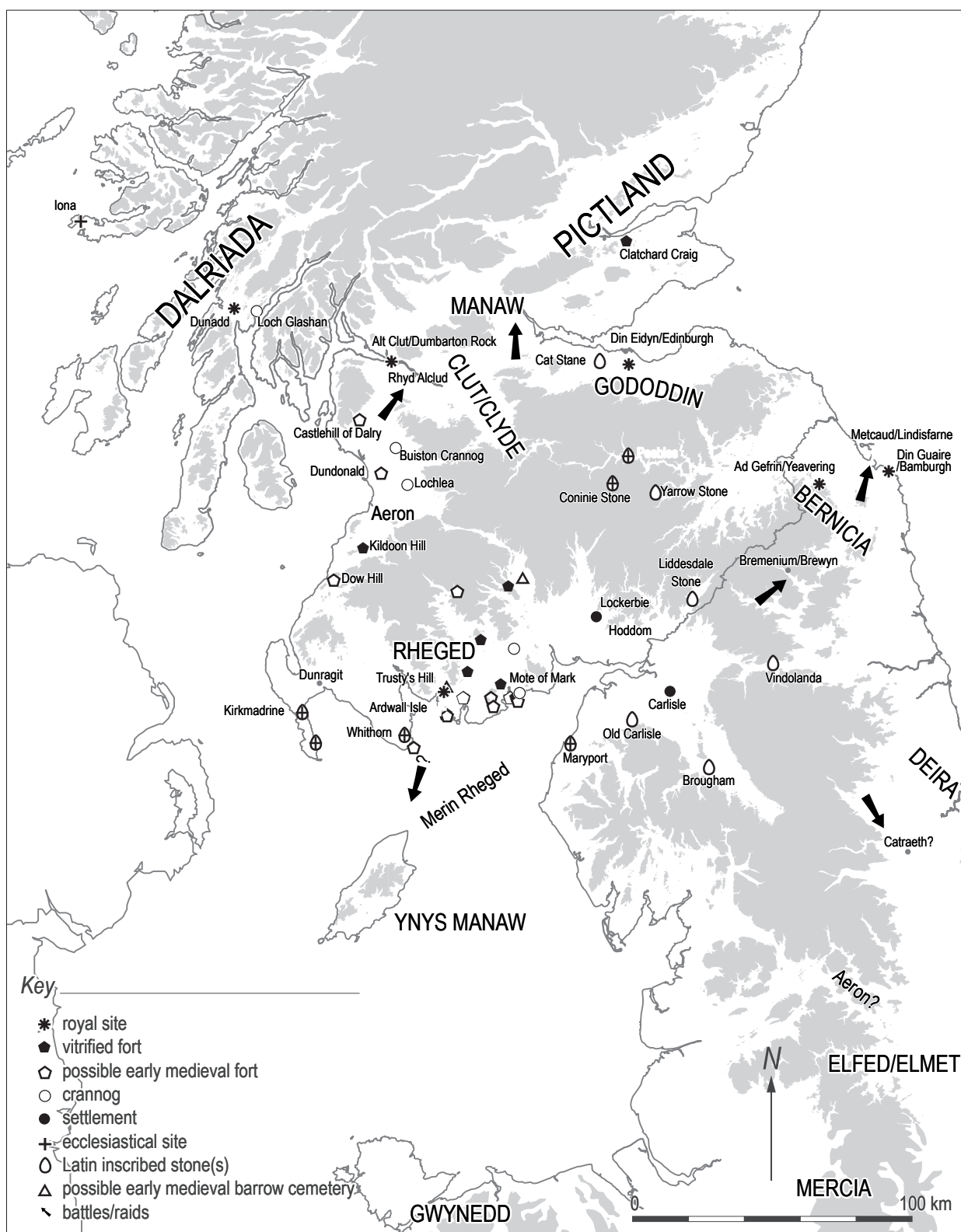


Figure 16: Map of Rheged and neighbouring kingdoms of northern Britain during the sixth and early seventh centuries AD, showing a selection of contemporary sites of varying status.

In examining the historical evidence, the lack of consensus in reconciling the meagre historical record with place-names was noted, arguments questioning the historical credibility of the source material rejected, and corroboration identified as the most appropriate tool for studying the archaeological record in relation to the historical and literary record of the same region over the same period (Toolis & Bowles 2016, 146-147; Appendix D). Archaeological evidence was therefore sought to corroborate the historical and literary perception of Rheged as a kingdom somewhere in the Solway regions that was pre-eminent amongst the kingdoms of northern Britain during the later sixth century AD (Ibid., 147-149).

The traditional expanse of Rheged, centred upon Carlisle, or an alternative scenario focused on the Rhins of Galloway, lack any supporting archaeological evidence (Ibid., 147). In contrast, the distribution of E-ware illustrates the attraction of central Galloway to Gaulish merchants during the sixth and seventh centuries AD, bypassing regions such as northern Wales and Cumbria entirely (Figure 14). It is doubtful that these exchanges occurred in a political void.

There are no other areas within the Solway region that can rival the archaeological evidence from central Galloway for wealth production, overseas trade or a complex settlement hierarchy. Within south-west Scotland, the only evidence for royal inauguration rites comparable with contemporary royal sites elsewhere is at Trusty's Hill. The complex hierarchical settlement pattern and abundance of material wealth from the sixth to the seventh centuries AD in central Galloway is also unmatched in the archaeological record from this specific period in the rest of Scotland and northern England (Figure 16). The archaeological evidence from Galloway thus corroborates the historical evidence for a kingdom that was pre-eminent in northern Britain in the decades around AD 600 but which faded into obscurity through the course of the seventh century. It was therefore concluded that this archaeological kingdom without an historical record, and the elusive kingdom of Rheged, a historical kingdom without an archaeological record, are one and the same (Toolis & Bowles 2016, 149; Appendix D).

Chapter 6: Iron Age Settlement Patterns in Galloway

In 2013, the writer was invited to give a lecture about Iron Age settlements at the *Iron Age in Galloway* Conference in Whithorn on 13 September 2014. This lecture was subsequently developed into a paper and published in the Transactions of the Dumfriesshire and Galloway Natural History and Antiquarian Society (Toolis 2015; Appendix E).

The paper sought to explore the classification, morphology and chronology of the later prehistoric and early medieval settlement record in Galloway, building on previous work (Toolis 2003 – Appendix A; Toolis 2007 – Appendix B; Toolis & Bowles 2013 – Appendix C) by examining the ephemeral basis for many of the site classifications standardly used *and* the distinctions made between sites in Galloway and other regions of southern Scotland. The identification of Galloway's settlement record as part of a later prehistoric 'Atlantic zone' within Scotland was tested against a south-east Scotland zone, with an examination of recognisable cultural traits in settlement architecture and material culture. The paper questioned whether the later prehistoric/early medieval settlement record of Galloway, and the culture this implied, was significantly distinctive from those apparent across other regions of Scotland.

Apparently distinctive local settlement types

The attempt to characterise Iron Age settlements in Galloway began with an examination of the region's promontory forts, crannogs, brochs and duns (Toolis 2015, 17-20; Appendix E), which are the site types that have led to affinities being previously drawn with Atlantic Scotland (Cunliffe 1983, 86 & 97; Cavers 2008, 16-23) and contrasts with south-east Scotland (Piggott 1966, 4-5; Feachem 1966, 76; Truckell 1984, 200; Harding 2004, 186). By amalgamating and refining the distribution patterns of differing site types with those identified in a previous regional synthesis (Cowley 2000, 168-174), visibly different patterns of settlement are apparent between Galloway and Dumfriesshire (Figure 17) within the south-west. Given the differential associations of Galloway and Dumfriesshire with other zones of Iron Age Scotland, this represented an opportunity to examine in microcosm the differing settlement patterns of Atlantic Scotland and south-east Scotland.

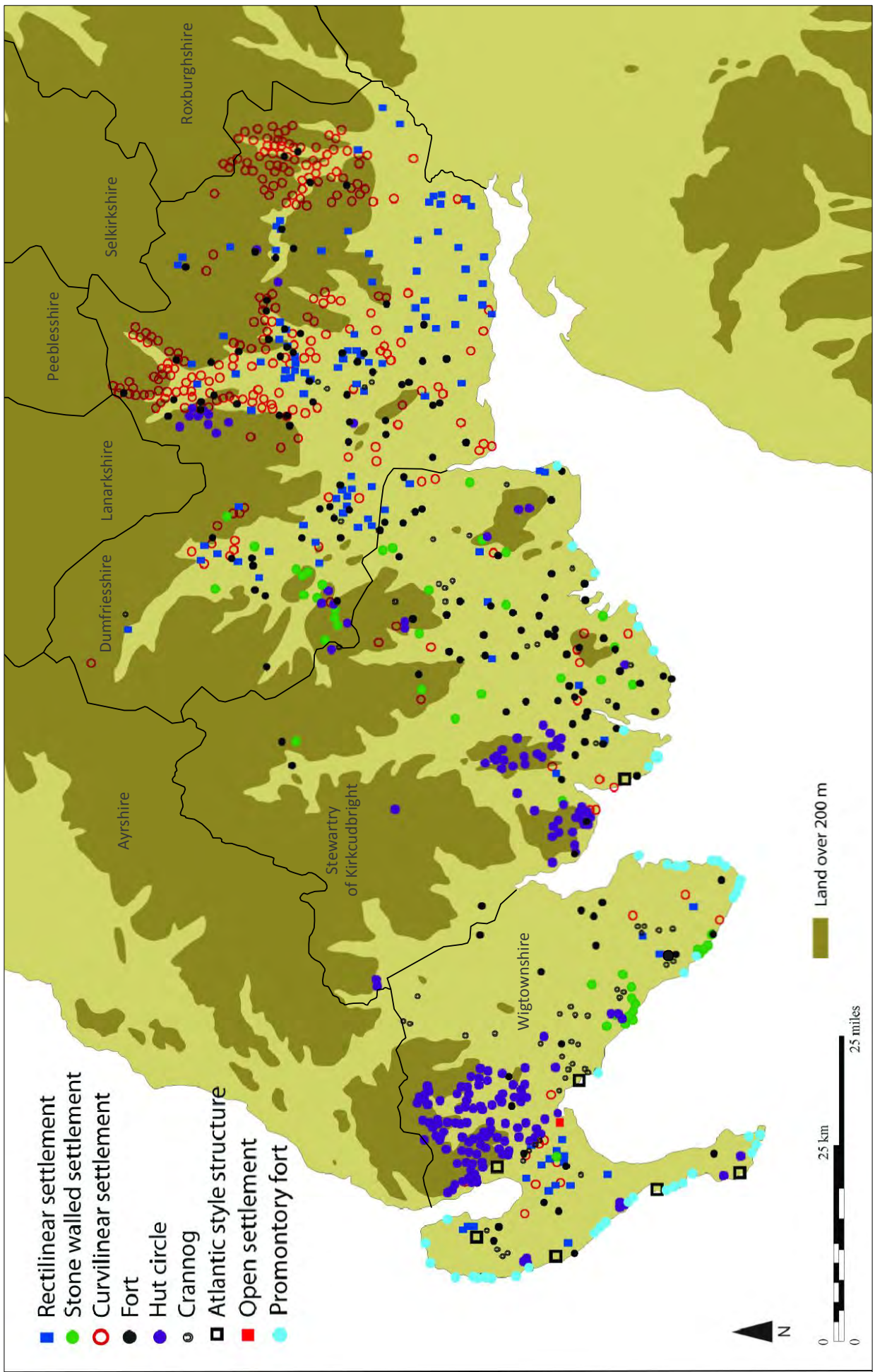


Figure 17: Distribution of Iron Age Settlements across Dumfries and Galloway

The starting point was to examine the validity of this ostensible divergence. In discussing promontory forts, previously seized upon as a distinguishable type of Iron Age settlement in the region (Feachem 1966, 76), the enormous variety amongst these sites, their adherence to particular distribution patterns amongst inland settlements (such as the corresponding concentrations of stone-walled sites within specific districts of Galloway) and their lack of especially defensive or maritime attributes was highlighted (Toolis 2015, 17; Appendix E), referencing previous work (Toolis 2003, 61-69; Appendix A).

As the excavation of Carghidown had revealed, comparisons can readily be drawn between the architecture and material culture of a promontory fort with that identified at inland Iron Age sites in the region (Toolis 2007, 304-308; Appendix B). It was proposed that the promontory forts of Galloway as a *group* reflected environmental conditions rather than cultural conditions as they simply adhere to the distribution of promontories on the north Solway coastline (Toolis 2015, 19; Appendix E).

The same approach was applied to crannogs, another site type distinguishable in this region, where the preponderance of crannogs reflects the relative prevalence of lochs and the coincidence of antiquarian interest with the drainage of lochs in Galloway primarily in the mid-nineteenth century (Ibid.). The resulting bias in the archaeological record owes more to environmental and visibility factors than inherent cultural aspects, though a caveat was noted, specifically the absence of crannogs in Cumbria despite the preponderance of lakes there (Ibid.).

The nature and status of occupation of crannogs, as distinct from a variety of other single household settlements - small stone-walled settlements, brochs and duns – across the region, was also questioned (Ibid.). While the affinity between these site types with those in Atlantic Scotland, where these classes of site are ubiquitous, was acknowledged, it was also observed that Galloway possesses in numerical terms no more brochs or other Atlantic style structures than other parts of central and southern Scotland where equivalent sizes of spatial clusters survive; nor were brochs in Galloway significantly different in scale and architecture from most brochs in these other areas or indeed Atlantic Scotland (Ibid., 19-20). The equivalence of other aspects of Iron Age settlement in Galloway with Atlantic Scotland, such as the scattered distribution of small stone-walled settlements across

Galloway with that of the duns of western Scotland, was acknowledged as was the presence of examples of settlement forms shared with south-east Scotland and northern England, such as rectilinear enclosed settlements. However, what gave rise to brochs in Galloway, for instance, was considered no different to what gave rise to brochs in central and south-east Scotland. Furthermore, the distinctive differences between the archaeological record of Scotland and England, such as the absence of crannogs and brochs south of the Border, may be more significant than interregional variations within Scotland (Ibid., 20). The implication of this will be examined in Chapter 7.

Size does not always matter

Interregional variations were then examined, the significance questioned of comparisons between the relatively small size of settlements in Galloway with those settlements to the east of the Nith and elsewhere in south-east Scotland. This apparent divergence has been previously understood to reflect a less developed, more socially fractured society in Galloway, perhaps comprising smaller social units (Piggott 1955, 149; Hanson & Maxwell 1983, 10). The author observed that the significant distinction between different sizes of settlements was between single household settlements and multiple household settlements, and that both forms of settlement were apparent both east and west of the Nith (Toolis 2015, 20-21; Appendix E).

The importance of the distinction between multiple and single household settlements is that it could be of a cultural nature: permanently occupied multiple household settlements reflecting different cultural practices for social cohesion from those of single households as well as creating opportunities for increased social interaction. Manifestations of cultural distinctions amongst multiple household settlements in Galloway were highlighted. Examples cited included the unusual occurrence of bread wheat at Rispaun Camp, matched in Galloway only recently at Cults Loch, and which is understood as a rare imported breed of cereal within later prehistoric Scotland (Robertson 2018, 83-84). Other examples included the sherds of native pottery in one of the roundhouses at Dunragit (Arabaolaza et al. 2015, 120), the latter notably distinct from the aceramic Iron Age culture evident elsewhere in Galloway (Hunter et al. 2018, 198). Furthermore, the excavation at Dunragit revealed evidence for the specialisation of one of the Iron Age buildings, for metalworking (Arabaolaza et al. 2015, 126). This latter site, located in the Rhins, is the only known open multiple household settlement

identified in the region (Figure 17); another multiple household settlement, Black Loch of Myrton located in the Machars, has subsequently been identified through excavation as enclosed (Cavers & Crone 2016, 47). The argument was (and remains) that size differences between single household settlements in Galloway and those east of the Nith are perhaps less significant than the difference between a settlement pattern solely comprising individual farmsteads to that comprising hamlets, villages *and* farmsteads. This is because the economic and organizational basis of single household settlements is significantly distinct from multiple household settlements (Ginn & Rathbone 2012, 260-263; Roberts 1996, 36). Differing settlement patterns entail different cultural practices and economies and imply differing network complexities too. The settlement patterns in Galloway and Dumfriesshire do not appear to significantly differ in this aspect during the Iron Age but may diverge in the early medieval period when a site hierarchy more clearly emerges in the Galloway record (Toolis 2015, 21-23; Appendix E).

Settlement hierarchies

Attention was also drawn to the apparent social pre-eminence of monumental single households in Galloway as elsewhere in Scotland (Ibid., 22), demonstrated for instance by the presence of high status Roman tableware at sites such as McCulloch's Castle (Scott-Elliot 1964, 123) and Castle Loch Mochrum (Raleigh Radford 1951, 60) amongst others (Wilson 2001, 83) that may have served to enhance some households at the expense of others (Ingemark 2014, 237-239). However, the body of evidence is insufficient to demonstrate settlement hierarchies in Iron Age Galloway, especially when compared to the more complex secular and ecclesiastical site hierarchies evident across south-west Scotland during the sixth and early seventh centuries AD (Toolis 2015, 22; Appendix E).

Nonetheless, the potential Iron Age roots of Galloway's early medieval settlement hierarchy were examined. The form and layout of Trusty's Hill, for instance, may have developed from, or was at least related to, a group of 'courtyard', nucleated and vitrified forts in the Stewartry district of Galloway, which comprise more complex layouts than merely multiple concentric ramparts (Figure 13). Given the sixth-seventh centuries AD dating evidence recovered from those of this group to have been excavated, Trusty's Hill and the Mote of Mark, and the third/fourth – fifth centuries AD dating evidence

from the only other excavated vitrified fort in the region, Castle O'er in East Dumfriesshire (Mercer, 2018, 72), a potential parallel with the spate of hillforts that emerged in Strathdon in Aberdeenshire between c. AD 400 and AD 650 was considered (Cook 2011, 216-218; Toolis 2015, 23; Appendix E), which will be further examined in Chapter 7.

Differential regional settlement distributions

In examining the distinctions previously drawn between various sub-groups of settlements either side of the Nith (Cowley 2000, 170-174; Figure 17), the writer sought to critically examine the basis for this perception, namely the site typologies and associated distribution patterns across Dumfries and Galloway. First, the morphological basis for distinguishing settlements from small hillforts was questioned, with local topography offered as an alternative explanation for differing surface characteristics (Toolis 2015, 23; Appendix E). Indeed, the very notion of forts in the Iron Age can be questioned as it is doubtful that any fulfilled a primarily military role in a comparable way to demonstrably military sites like Roman forts or medieval castles, for instance. At best, such Iron Age hilltop sites can be described as fortified settlements. That a disparate assortment of enclosed settlements were unenclosed for large periods of their occupation, as demonstrated by sites such as Broxmouth, Hownam and Carghidown (Armit & Mackenzie 2013, 18-19; Piggott 1948, 198-200; Toolis 2007, 272; Appendix B) raised caution about defining all later prehistoric settlements solely by how they were enclosed at some point in time during a much longer duration of occupation (Toolis 2015, 23; Appendix E). As the excavations at Trusty's Hill demonstrate, even a site that can be clearly classed in terms of nature, status and date, in this case a royal nucleated fort of the sixth and early seventh centuries AD, was almost certainly a very different form of settlement in the fourth century BC when the earliest occupation of this site is evident (Toolis & Bowles 2013, 42; Appendix C).

The critical role of visibility and recording in the formation of later prehistoric site distribution patterns (Cowley 2000, 167-168; Halliday 2006, 11-12) was also highlighted, demonstrated by the distribution of hut circles in Galloway (Figure 17) which almost exclusively follows RCAHMS surveys of unimproved ground (Cowley 2000, 169). The point was made that, in analyses of settlement patterns, what is not apparent in distribution maps should be considered too (Toolis 2015, 24; Appendix E). This was

exemplified by comparisons drawn between the East Rhins and the Machars of Galloway, where a dearth of recorded cropmarks within low-lying farmland in the latter district (Figure 7) may merely reflect the predominance of pasture and poorly drained soils which inhibit detection, resulting in a comparative scarcity of aerial survey results. The apparent preference in Iron Age Wigtownshire for the occupation of either lochs, high ground or the coastal edge reflects the survival and visibility of sites in the agricultural margins of the *modern* landscape (Toolis 2015, 24; Appendix E).

In questioning whether Iron Age settlement patterns in Galloway were truly different from those in Dumfriesshire or south-east Scotland, several other aspects were examined (Ibid., 24-25). Attention was drawn to the lack of a large enclosure crowning a regional hilltop landmark as is evident in East Lothian, the Scottish Borders and Dumfriesshire. However, there is no regional hilltop landmark in Galloway comparable to Traprain Law, the Eildon Hills or Burnswark; the large regional landmark instead being not a hill but a mull and recognizably so as *Novantarum Promontorium* in Ptolemy's Geography of the early second century AD (Ordnance Survey 1978, 15). Though the absence of dating evidence was acknowledged, it was also noted that the morphology of the closely spaced ramparts that enclose an area of 40 ha at the Mull of Galloway, far more than any other hillfort in southern Scotland, is difficult to consider as being anything other than later prehistoric in date (Strachan 2000). It was further noted that while the bulk of sites in Galloway lie below 0.7 ha with only a handful above 1 ha and none, apart from the Mull of Galloway, above 4 ha (Hogg 1979, 126-134), this is not so different from Dumfriesshire or East Lothian, where the bulk of sites lie below 0.8 ha, again with only a handful of larger sites (Hogg 1979, 134-139; Reader & Armit 2013, 483). The perception of an apparent absence of large, complex and well-preserved settlements in Galloway in comparison with East Dumfriesshire, East Lothian or the Borders may be more due to the intensity of regional surveys in these latter areas and the lack of excavations within any of the larger hillforts in Galloway itself (Toolis 2015, 24; Appendix E).

Other perceived differences between settlements in Galloway and south-east Scotland such as the interior surfaces of enclosed settlements, where many of the south-eastern sites are packed with visible stances of timber roundhouses but sites west of the Nith are not, may be due to divergent patterns of survival and visibility caused by differing agricultural regimes between these regions. The impact of agriculture, not simply plough-damage

but also poaching and erosion by cattle, has demonstrably impacted the interior of enclosed settlements (Armit & Mackenzie 2013, 21), including even some of the most marginal places of Galloway (Toolis 2003, 71-72; Appendix A), a region where beef and dairy farming is predominant rather than the sheep farming more common in the Borders, resulting in divergent impact patterns to archaeological surfaces attributable to livestock (Toolis 2015, 25; Appendix E).

The writer was, nevertheless, careful to acknowledge differences between the settlement patterns and architecture of south-east Scotland and Dumfries and Galloway, such as the eastern predominance of ring-ditch roundhouses (Armit & Ralston 1997, 175-176) and the distinctive settlement form comprising stone-walled roundhouses located at the rear of a cluster of small enclosed yards, distributed across south-east Scotland and northern England but not as far west as Dumfriesshire or Galloway (Toolis 2015, 25; Appendix E).

Though acknowledging that differences in material culture have also been drawn between south-west, north-west and south-east Scotland (Hunter 1997, 111; Banks 2002, 31), it is difficult to reconcile these with matching settlement patterns. Most of the apparent concentrations of site types in Wigtownshire (Figure 17) can be attributed either to environmental factors, such as the preponderance of lochs, hills and promontories, or visibility and surveying, evidenced by the distribution of hut circles (Cowley 2000, 169). While the cluster of Atlantic style brochs and duns around the Rhins might distinguish the westernmost part of Galloway from the rest of the region, there is an outlier of this type in the Stewartry, the galleried dun at Castle Haven. Furthermore, while brochs and duns are clearly much denser on the ground in northern and western Scotland, hillforts are nevertheless present in these regions too (Armit & Ralston 1997, Figure 10.5). The focus of research on prominent single household settlement types in Galloway just as in Atlantic Scotland has perhaps led to a bias in the perception of the entire settlement patterns within these regions (Toolis 2015, 25; Appendix E).

Material culture

The scarcity of material culture in Iron Age settlements in Galloway is hard to square with the hoard of utilitarian metalwork found in the Carlingwark Cauldron, or the recovery of exquisitely crafted objects such as the Balmaclellan Mirror and Torrs Pony Cap. Indeed, the Carlingwark Cauldron

Hoard is one of three located across southern Scotland (Piggott 1955, 2-5) and intrinsically demonstrates shared cultural traits between at least the Stewartry district of Galloway and south-east Scotland (Toolis 2015, 25; Appendix E).

The thin layer of occupation debris and modest artefact assemblage at Carghidown was attributed to the regular sweeping of floors apparent also at many other sites in Galloway, Dumfriesshire, the Western Isles, Shetland, East Lothian and further afield (Ibid., 26). But the author recognised the implication that this cannot therefore account for the material poverty of Iron Age settlements in Galloway in comparison with assemblages from settlements in other parts of Scotland, and it may be that Iron Age communities in Galloway perhaps utilised perishable organic materials or recycled or disposed of their material wealth to a more significant degree than communities elsewhere in Scotland. However, this apparent cultural distinction is tempered by the examination of the archaeological context of materially wealthy settlements in central and southern Scotland, where catastrophic destruction is a common and highly significant factor for introducing excellent conditions for preservation *in situ* (Ibid.). That no prominent single household settlement similarly preserved in time by a catastrophic destruction event, has so far been excavated in Galloway was noted as a potential bias. Furthermore, the re-excavation of Trusty's Hill provides an example where a combination of improved techniques and resources and a little luck revealed a very much more materially wealthy settlement than that apparent from the 1960's examination of the hilltop (Ibid.).

Such work is also necessary to overcome the ephemeral and tenuous distinctions currently drawn between the sheer diversity of sites. As new evidence from Ireland reveals, where Neolithic and Bronze Age dates but absolutely no evidence of Iron Age construction or occupation have been recovered, there is no chronological basis to previous classifications of Irish hillforts (O'Brien & O'Driscoll 2017, 339). Furthermore, simply because an archaeological site can be described as a 'type' of site does not actually confer meaning upon it because a range archaeological site types may not reflect the distinctions that the people of that period themselves may have drawn between different settlements (Ibid., 27). This is not denying variety amongst later prehistoric sites in Galloway, but archaeological site types can only have meaning if they reflect how contemporary people and communities

recognised differing settlements. A more comprehensive body of evidence for the chronology, duration, internal development and material culture of occupation (and nature of abandonment) of a range of morphologically diverse settlements may enable the recognition of differing or comparable cultural traits and thus allow meaningful settlement patterns to emerge in the archaeological record.

Cultural traits of Iron Age Galloway

Recognisable cultural traits in Iron Age Galloway such as the cleanliness of roundhouse interiors, the deposition of high status metalwork in wetland locations, the presence of monumental domestic architecture, the correlation between numerous small single household settlements and fewer large (and presumably multiple household) settlements, and the potential development of complex forts from the late Iron Age into the early medieval period are significant. However, these traits do not distinguish Iron Age Galloway from neighbouring regions but instead reflect broad later prehistoric cultural practices apparent across Scotland. While recognising cultural similarities across southern Scotland and northern England, the absence of brochs and crannogs south of the border, starkly illustrates distinctive cultural differences too, for such monumental domestic architecture does not reflect environmental factors but stems from cultural traits (Toolis 2015, 27; Appendix E); this will be examined further in Chapter 7.

That the same cultural choices for defining households in Galloway are common across Scotland but appear to be entirely absent in Cumbria (McCarthy 2000, 136-137; McCarthy 2002a, 46-47) suggests that the distinction apparent between the regions north and south of the Solway is perhaps more significant than the more superficial interregional variations within Scotland, because this distinction may define a more significant cultural difference. While it is commonly asserted that the present Anglo-Scottish border is purely arbitrary in relation to prehistory (Bevan 1999, 9; Armit 1999, 65), the question nevertheless remains as to why there are no crannogs, brochs, or indeed souterrains, to the south of it. Given the occupation of the southern brochs within the early centuries AD (Armit & Ralston 1997, 176), the proximity and physical presence of Hadrian's Wall likely inhibited the construction of brochs further south, but this merely accentuates the cultural divergence. The same cause cannot be attributed for crannogs, which originate from the middle of the first millennium BC and

continued throughout and beyond the span of the Roman occupation of southern Britain (Henderson 1998, 230).

As a line on the map, the border is undoubtedly arbitrary from a prehistoric perspective, but as a wider *zone* of land, southern Scotland/northern England has witnessed a series of fluctuating national cultural boundaries, whether the limits of Roman Britain, the erratic boundaries of the northern British kingdoms with Anglo-Saxon Northumbria, and eventually the medieval kingdoms of Scotland and England (Toolis 2015, 28; Appendix E). The overlapping distributions of brochs, crannogs and rectilinear enclosed settlements suggests that significant national cultural boundaries may have plausibly fluctuated across this zone throughout later prehistory too; this will be examined further in Chapter 7.

Conclusions

The examination of Iron Age settlement patterns in Galloway raises the question of whether the regional approach that underpins Iron Age research in Scotland is valid and if a much broader perspective is instead required to achieve a better understanding of Iron Age settlement patterns (Ibid.). The pervasive regionalism to Iron Age research in Scotland (Armit & Ralston 1997, 170) naturally gravitates to a perspective that takes as given that each subject region/province/zone is distinct, and so underplays the similarities of Iron Age cultural traits across Scotland and the distinctions from cultural traits south of the border. Future research has the potential to embed, rather than extricate, the archaeology of later prehistoric and early medieval Galloway more fully within the core underlying patterns of settlement, hierarchy and culture in Scotland during this period.

Chapter 7: Shifting perspectives of later prehistoric and early medieval settlement patterns in Galloway, Scotland and beyond

The writer's approach to the investigation of Carghidown (Chapter 4) was largely taken from a regional perspective, to understand the context of the site within its local settlement pattern. The investigation of Trusty's Hill (Chapter 5) was approached from regional and national perspectives, to understand not only the local context of the site but also its regional context. A national and supranational perspective was sought during the examination of Iron Age Galloway (Chapter 6) to understand the regional and national context of settlement patterns there. Drawing on the accumulated evidence and interpretation, this concluding chapter seeks to examine through regional, national, supranational and chronological perspectives how the archaeology of later prehistoric and early medieval Galloway is embedded within core underlying patterns of settlement and culture in Scotland between 400 BC and AD 650. This chapter will also draw out contrasts during this period between settlement and culture in Scotland and that of neighbouring countries.

Regional perspective

As discussed in Chapter 5, Trusty's Hill lies within a district of Galloway where a cluster of vitrified and nucleated forts is apparent, and which may be contemporary with each other during the early medieval period. But while vitrified forts such as Edgarton Mote and Castlegower and nucleated forts including Barn Heugh and Nethertown of Almorness share a similar scale and morphology with Trusty's Hill (Figure 13), none of these have features such as rock-cut basins and Pictish carvings or formally demarcated entranceways. Nor does the vitrified and contemporaneous Mote of Mark, which also lies in the Stewartry and was interpreted by its excavators as the fortified workshop of a mastersmith (Laing & Longley 2006, 174 & 179). Further to the north, in Nithsdale, the metalworking debris of another early medieval high-status settlement was found in midden material below the fortified, vitrified and prominent peak of Tynron Doon from which a gold filigree decorated panel, dated to the sixth-eighth centuries AD, was recovered (Truckell 1963, 94; Williams 1971, 112-117; Harding 2004, 209). Altogether, these sites, along with the contemporary crannogs at Milton and

Barean lochs (Henderson 1998, 230) and the galleried dun at Castle Haven (Alcock et al. 1989, 209; Cessford 1994, 73-74; Laing & Longley 2006, 165) potentially represent the remnants of a hierarchy of early medieval high-status secular settlements largely clustered within the Stewartry district of Galloway (Figure 15). There may also survive contemporaneous secular funerary sites, comprising the barrow cemeteries at Barwhill, a short distance to the north of Trusty's Hill, and Home Plantation overlooked by Tynron Doon (Toolis & Bowles 2016, 143; Appendix D). Coupled with this is a hierarchy of contemporaneous ecclesiastical settlements comprising Whithorn, Kirkmadrine and Ardwall Isle, the last visible from Trusty's Hill itself (Ibid., 143-145). Given the evidence for long-distance trade at Whithorn and the Mote of Mark (Campbell 2006, 113) and now Trusty's Hill, all attributable to a precise timespan over the late sixth and early seventh centuries AD, it is not unreasonable to envisage a redistributive system based around prominent secular defended centres in which high status ecclesiastical sites and many of the other less eminent secular settlements also participated, as envisaged elsewhere (Campbell 1996, 84-88). This early medieval settlement pattern in Galloway appears to reflect a social hierarchy of royal households (Trusty's Hill), noble and high-status craft households (other nucleated forts, Mote of Mark, Castle Haven) and lesser status settlements (Milton and Barean Loch crannogs). This secular hierarchy was coupled with an ecclesiastical hierarchy of a prelate monastic settlement (Whithorn) and monastic settlements of lesser status (Kirkmadrine and Ardwall Isle).

The early medieval (fifth-mid seventh century AD) settlement pattern in Galloway contrasts with that of the Iron Age in the region, which has so far revealed no comparable evidence for such complexity and hierarchy. There are no Iron Age settlements in Galloway that have produced evidence for gold, silver and bronze metalwork production, long-distance trade, royal inauguration rites or clear hierarchical relationships to each other. Comparison between Carghidown and potentially contemporary Iron Age settlements in the South Machars such as Rispaing Camp and Cruggleton Castle revealed no equivalent evidence to distinguish the hierarchical status of one settlement household over another (Toolis 2007, 305-8; Appendix B). Though the scale of the enclosing boundaries at Rispaing Camp is much greater than at Carghidown, this may simply be due to the larger population of this multiple household settlement. At neither site was the form of enclosing boundary especially complex or indicative of the same

ostentatious control of resources as is apparent at Trusty's Hill (Haggarty & Haggarty 1983, 23 & 40-41; Toolis 2007, 307; Appendix B; Toolis & Bowles 2016, 108-109; Appendix D). Nor did the surviving material culture at Carghidown, Rispain Camp or Cruggleton Castle demonstrate differential access to high-status metalwork (Toolis 2007, 307; Appendix B). Recent excavation of a suite of neighbouring sites in the Rhins of Galloway, including a palisaded settlement, crannog and promontory fort, has revealed a dynamic and sequential settlement pattern between the mid sixth century and first century BC rather than a hierarchical pattern of contemporary Iron Age settlements (Cavers & Crone 2018, 241 & 245).

While the question remains as to how early medieval settlement patterns in Galloway developed from preceding Iron Age settlement patterns, at least the potential origins of the morphology of early medieval forts in Galloway can be examined. In essence, settlements in Galloway that have been securely dated to between the mid-first millennium BC and early first millennium AD, such as Carghidown promontory fort (Chapter 4), Cults Loch 4 promontory fort (Cavers & Crone 2018, 141) and Cults Loch 5 palisaded settlement (Ibid., 157), in common with other Iron Age settlements elsewhere in southern Scotland such as Woodend in Annandale (Banks 2000, 231), Braehead in Glasgow (Ellis 2008, 182) or Broxmouth in East Lothian (Armit & Mackenzie 2013, 10), are enclosed with *concentric* arrangements of palisades, ramparts and/or ditches, whether contemporary or sequential. The nucleated forts in Galloway on the other hand, in keeping with the securely dated early medieval nucleated forts at Dunadd in Argyll and Dundurn in Perthshire (Alcock et al. 1989, 205), comprise *non-concentric* arrangements of ramparts and ditches enclosing discrete areas of each hilltop (Figure 13). Whether these layouts arrived via sequential accretion or were planned as unitary systems, this differential arrangement within forts is potentially significant. Though the case for a hierarchical organisation of interior space is yet to be demonstrated (Lane & Campbell 2000, 231-236; contra Alcock et al. 1989, 210-211) these non-concentric layouts nevertheless demonstrate a divergent use of space, organisation of settlement and by extension way of life within at least some forms of high-status settlement during the early medieval period from that *predominantly* apparent during the earlier Iron Age period.

The use of space within the Iron Age single household settlements is encapsulated by the internal layout of Carghidown, comprising a roofed zone

(ring-groove roundhouse) and an open zone (clay surfaced yard), both enclosed by the same rampart and ditch (Figure 4). As noted in Chapter 4, this 'house plus yard' layout is common to many Iron Age settlements across and outwith the region. It is likely that the open cobbled yards within these settlements acted as animal holdings. While this is not always demonstrable (Banks 2002, 30; Toolis 2007, 302; Appendix B), where such evidence can be recovered, for instance from Woodend, livestock, particularly cattle, were apparently kept *within* settlement enclosures (Banks 2000, 271-272).

The layout of Trusty's Hill, on the other hand, comprised a more complex arrangement of demarcated areas, which was inferred to comprise an interior separated into a small domestic, presumably roofed zone at the summit and a workshop along a lower-lying terrace (Toolis & Bowles 2016, 106-107; Appendix D; Figure 12). Both these zones were enclosed by a timber-framed stone rampart and accessed from the south-east via a delineated and symbolically charged (because of the associated features) entranceway beyond which lay a series of outer enclosures likely utilised for holding and displaying livestock (Ibid., 109-111). Two further outer enclosed areas lay on the northern flank of the hillfort, though given the difficulty of access to these, it is unlikely that they were also used for holding livestock; they may have served an alternative function (e.g. ancillary buildings/working areas?). Trusty's Hill has probably the most complex layout of any nucleated fort in Galloway (Figure 13), as already noted above and briefly considered in Chapter 5. However, there are several other sites in the region identified as possessing a similar morphology to Trusty's Hill (Truckell 1963, 94-95; Feachem 1966, 76; Feachem 1977, 129-131) where a comparable separation of fortified domestic and industrial areas from outlying livestock enclosures may have existed. Furthermore, this cluster of forts found within a 700 km² area of the Stewartry district of Galloway (Figure 15) may contain evidence for the development of nucleated forts in the early medieval period from enclosure plans that became increasingly non-concentric through time during the preceding centuries.

A hypothetical sequence of changing plans can be identified. The beginnings of this divergence from essentially concentric arrangements to the nucleated non-concentric layout might be apparent in local 'courtyard forts', such as Dungarry and Suie Hill, where dry-stone ramparts form an oblong enclosure around each summit while lower-lying dry-stone outworks enclose at least one flank of each hill (Figure 13). While both sites are undated, a similar

layout to Suie Hill, albeit on a much larger scale, is evident at Castle O'er in Eskdale (RCAHMS 1997, 80) where a non-concentric outer annexe along one side of this oval hillfort was radiocarbon dated to the same period as the site's defences and attributed to corralling livestock (Ibid., 79). Castle O'er also includes an elaborate courtyard entranceway demarcated by two horn-works (Ibid. 80-82), somewhat like the courtyard entranceway to Dungarry. Interestingly, the timber-framed stone fortifications at Castle O'er appear to have been constructed in the third or fourth century AD before being vitrified and destroyed at some point before the end of the fifth century (Mercer 2018, 225). This evidence is particularly significant because it demonstrates that the development of a more complex non-concentric layout of timber-framed stone fortifications was occurring in south-west Scotland during the second quarter of the first millennium AD. It thus lends plausibility to the notion that the non-concentric layout of Galloway forts such as Arden, Nethertown of Almorness, Castlegower, Barnheugh and Edgarton Mote along with Trusty's Hill (Figure 13) might represent the emergence of increasingly complex nucleated forts around the middle of the first millennium AD, though further excavation will be required to determine if these six sites are sequential or contemporary with each other.

Of course, non-concentric arrangements of ramparts may owe more to the stepped topography of the hill of which they were set; the gradual accretion of outer earthworks to what was originally a small hilltop enclosure eventually produces a plan directly related to the shape of the available terraces, as demonstrated at Dundurn and Dunadd (Alcock et al. 1989, 210; Lane & Campbell 2000, 86-97). However, such a direct correlation with the geological form of the hill does not reflect the topography or scale of Castle O'er where there is no natural impediment to an alternative concentric arrangement of the outer enclosure (RCAHMS 1997, 78-79). Nor would the shapes of Suie Hill or Dungarry have prohibited the development of concentric rings of ramparts. Trusty's Hill on the other hand does inhibit concentric rings below the summit rampart, the eastern and western flanks of the hill being too steep to accommodate outer ramparts (Figure 12). Alternatively, it may be that the Galloway forts listed above represent small enclosed settlements erected within much larger spaces defined by earlier ramparts. While this can only be determined by excavation and it does not necessarily preclude the incorporation of old ramparts into a new layout (Alcock et al. 1989, 210), it is worth noting that this was emphatically not the

case at sites outwith Galloway such as Castle O'er, Dunadd or Dundurn where the available evidence indicates growth over time (RCAHMS 1997, 79; Lane & Campbell 2000, 86-97; Alcock et al. 1989, 204-206). At Trusty's Hill, the layout of the ramparts and outer banks is also more convincing as a unitary system of fortification of the site (Figure 12), albeit one that probably developed over some years around the late sixth century AD, than as the two-phase Iron Age/Post-Roman model favoured by Charles Thomas (1961, 66-67; Toolis & Bowles 2016, 113 - Appendix D).

The occurrence of vitrification at Castle O'er is another potentially significant aspect worth examining in relation to the nucleated forts of Galloway. Though the vitrification of timber-framed stone ramparts is not culturally or chronologically distinctive, vitrified forts being distributed widely across Europe from as early as the Bronze Age, they are not so common in Dumfries and Galloway in comparison with central and highland Scotland (MacKie 1976, 209-210, 222 & 144; Ralston 2006, 143). Of those sites in the Stewartry district of Galloway (in contrast to Wigtownshire and Dumfriesshire), close comparisons can be drawn between their morphology, scale and/or date (Toolis & Bowles 2016, 114 - Appendix D). Richard Feachem identified eight vitrified forts amongst a group of 26 sites he classed as sub-rectangular forts distributed across Galloway (1966, 76), though only six, including Trusty's Hill, were identified by Euan MacKie along with a further two in Dumfriesshire (1976, 233-235). The five vitrified forts within the Stewartry including Trusty's Hill, not only share a similar morphology and scale but also a comparable pattern of vitrification. Edgarton Mote and Castlegower both comprise small fortified summits with lower-lying enclosures and terraces, with Edgarton also cut off from the ridge to the north and south by rock-cut ditches of similar proportions to that at Trusty's Hill (RCAHMS 1914, 35-36 & 60-61). The fort at Mochrum Fell similarly comprises a fortified summit of a prominent knoll with a lower-lying outwork. At all three of these sites it appears that it was only the summit rampart that was vitrified, as is apparent at Trusty's Hill, which might indicate that timber-framed stone ramparts only enclosed the crests of these sites too. While the Mote of Mark has no apparent outworks, it too comprises a single timber-framed stone rampart forming an irregular oval enclosure around the summit of a small rocky knoll (Laing & Longley 2006, 2). As this is the only Galloway vitrified fort other than Trusty's Hill to have been excavated and which also yielded evidence for occupation in the sixth and seventh centuries AD (Laing

& Longley 2006, 24) contemporary with Trusty's Hill, their contemporaneity lends support to the hypothesis that the other vitrified forts in the Stewartry sharing a comparable morphology and scale to Trusty's Hill may also date to the early medieval period; and furthermore that their destruction by fire reflects the same process of Northumbrian conquest of south-west Scotland over the course of the seventh century AD attributed to the burning of Trusty's Hill and the Mote of Mark (Toolis & Bowles 2016, 134 – Appendix D; Laing & Longley 2006, 168). Elsewhere in south-west Scotland, isolated examples of vitrified ramparts beyond the cluster in the Stewartry are demonstrated by Kildoon Hill in Ayrshire, which has been observed to closely resemble Trusty's Hill (Childe & Graham 1943, 39; RCAHMS 1953) and Tynron Doon in upper Nithsdale, another nucleated fort dateable to the early medieval period as discussed above. Except for Tynron Doon, all these vitrified forts coincide with parishes where clusters of early Anglian settlement are suggested by place-name evidence (Brooke 1991, 297 & 316-318).

National perspective

Excluding the undated vitrified forts in Galloway, the dating evidence from Trusty's Hill, the Mote of Mark, Tynron Doon and Castle O'er, for either the re-fortification of previously-occupied hillforts or the fortification of new hilltop sites, is comparable with the spate of hillforts that emerged in eastern and north-eastern Scotland between c. AD 380 and AD 650 (Close-Brooks 1986, 176; Cook 2011, 216-218). These include a range of enclosed settlements, including nucleated forts such as Clatchard Craig, King's Seat Dunkeld and perhaps Mither Tap (Noble et al. 2013, 1140); hillforts such as, Craig Phadrig and Hill of Barra; coastal promontory forts such as Burghead and Portknockie; ringforts such as Maiden Castle and Cairnmore; and palisaded and ditched enclosures such as Rhynie (Ibid., 1141-1143).

These enclosed early medieval settlements vary in terms of morphology and size and represent a mixture of entirely new sites and the re-use of older sites (Cook 2011, 214-216). The 1.1 ha sub-oval interior of Hill of Barra is defined by three ramparts, originally dating to between the sixth and fourth centuries BC but with an outer ditch added sometime in the fourth-sixth centuries AD. Maiden Castle, from which decorated glass and evidence of non-ferrous metalworking were recovered, is a much smaller circular bivallate enclosure, its interior space largely taken up by a 20 m diameter

stone-walled structure, with both the construction of this and the innermost of the ramparts radiocarbon dated to between the early fifth to mid seventh centuries AD. Cairnmore comprises a bi-vallate sub-oval enclosure with an external non-concentric rampart and ditch solely at its south-east entrance; early medieval brooch and pin moulds were recovered while radiocarbon dates indicate that it was constructed and destroyed between the early fifth and mid-seventh centuries AD. Burghead, occupied from the third century AD to beyond the ninth century AD, stands out amongst the coastal forts as a large, strongly fortified regional power centre that has yielded a wealth of Pictish carvings (Small 1969, 67; Edwards & Ralston 1980, 207; Alcock 1988, 26; Ralston & Armit 1997, 225; Foster 1998, 11). A smaller, though strongly fortified site also on the Moray coast is Green Castle at Portknockie, where excavations revealed a 6 m wide timber-laced rampart that provided dates indicating occupation from the seventh and eighth centuries AD onwards (Ralston 1980, 32). The prominent fort at Mither Tap of Bennachie is defined by an inner rampart around the summit and a non-concentric outer rampart; interior sealed deposits yielded radiocarbon dates of cal AD 640-780 and cal AD 340-540 (Atkinson 2007, 28). The accumulation of this evidence indicates a hierarchy of settlements, with the royal site of Rhynie distinguished from the rest near the beginning of this period, AD 450-550, by its particularly rich material culture, access to long-distance trade networks, production of fine metalwork and ritualised entranceway (Noble et al. 2013, 1142), key factors comparable with other near contemporary royal sites elsewhere in Scotland (Table 2; Chapter 5). The demise of Rhynie and many of the smaller sites in the sixth century while the occupation of larger and more prominent sites such as Mither Tap and Burghead continued into the following centuries (Noble et al. 2013, 1143) emphasises the dynamic nature of this settlement pattern.

Though a wave of construction of new hillforts and refurbishment of older hillforts is apparent across Scotland from the third century AD through to the eighth century AD (Alcock 2003, 179; contra Halliday 2006, 24), this evidence from north-east Scotland is especially pertinent to Galloway. It demonstrates not a widely and uniformly distributed pattern of settlements but rather a hierarchy of sites including a cluster of fortified settlements within a 700 km² area of Strathdon with isolated outliers along the coast (Cook 2011, 210). The cluster of early medieval enclosed settlements in Strathdon represent over 50% of the known enclosed settlements in this specific area

of north-east Scotland (Ibid., 219). Given that later prehistoric site patterns only reflect what is visible and recorded (Chapter 6; Toolis 2015, 24 - Appendix E) there are likely to be further early medieval enclosed settlements presently buried and unknown within other districts of the north-east, though it is doubtful that these are as densely distributed as in Strathdon.

Similarly, the distribution of high status fortified settlements from the post-Roman centuries in Dumfries and Galloway appears to be concentrated in the Stewartry district of Galloway with potential outliers along the coast and to the north (Figure 15). The radiocarbon dates from Trusty's Hill demonstrate a sequence of re-occupation and fortification of the site over the course of the sixth century AD until an abrupt abandonment before the middle of the seventh century AD. The radiocarbon dates from Mote of Mark demonstrate the construction of a *de novo* hillfort in the sixth-seventh centuries AD (Laing & Longley 2006, 24). As discussed above, there are reasonable grounds to consider that the other nucleated and vitrified forts in the Stewartry district of Galloway may similarly date to the sixth and seventh centuries AD. While the radiocarbon dating evidence from Castle O'er indicates that this process of fortification of new hilltop settlements had begun to develop in Dumfriesshire in the third-fourth centuries AD, and there may well be other forts in the Machars and Rhins of Galloway from around this period awaiting discovery, the *cluster* of nucleated and vitrified forts in the Stewartry is unmatched elsewhere in Wigtownshire or Dumfriesshire.

A comparable set of mid-first millennium AD elite enclosed sites may be the group of small nucleated forts in Argyll, including Dunadd, Dun a Chrannag, Dun a' Choin Dhuibh and Dun Chonallaich. Indeed, a striking density of early medieval fortified and unenclosed secular and ecclesiastical sites has been recognised in mid Argyll, within a 400 km² area centred upon Dunadd (Lane & Campbell 2000, 23-24 & 255-258). These include Dun Chonallaich, the duns at Ardifuir and Eilean Righ, the craft workshop at Loch Glashan crannog, the open settlement at Bruach an Drumein and ecclesiastical site at Barnakill, all contemporary with the seventh century royal stronghold on Dunadd itself (Ibid., Alcock et al. 1989, 209; Crone & Campbell 2005, 117-127).

A small cluster of nucleated forts, including Rubers Law, Moat Knowe Buchtrig, Castle Hill Ancrum and Burnt Humbleton, lies within a 400 km² area

of Roxburghshire (RCAHMS 1956, 35); excavation of one of these, Rubers Law, yielded Roman masonry (Curle 1905, 225). Another separate small cluster of nucleated forts, comprising Cademuir Hill 2, Tinnis Castle and Macbeth's Castle, is found within a 100 km² area of Peeblesshire, where it coincides with two Romano-British Christian monuments (RCAHMS 1967, 105, 144, 154 & 176-177).

This is not to say that early medieval nucleated forts only occur in clusters or that each of the clusters described above definitely contained a royal site. It remains to be demonstrated whether early medieval forts and settlements are clustered around other royal sites such as Dumbarton Rock and Edinburgh Castle Rock, but the 90 km distance between these two falls within the 40 km and 100 km distances that separate other clusters of nucleated forts. It is worth bearing in mind that the *archaeological* evidence that marks out Dunadd and Trusty's Hill as of royal character and thus predominating over other forts in Argyll and Galloway respectively rarely survives. Inauguration features within closely equivalent archaeological contexts (comprising a demarcated area within a complex fort containing evidence for a wealthy material culture and the production of such wealth during the sixth-seventh centuries AD) are not known to survive at Dumbarton Rock or Edinburgh Castle Rock. But it may be that each of the clusters of nucleated forts across Scotland holds evidence (such as complex layouts of non-concentric enclosed spaces around a fortified summit, a rich material culture, access to long-distance trade networks and production of fine metalwork) of the traits by which specific households attained and consolidated their pre-eminence amongst their peer groups enabling some to even claim royal status.

It is not possible to identify royal sites within the settlement record elsewhere in Scotland prior to the fifth and sixth centuries AD or indeed to identify complex site hierarchies during the late Iron Age comparable to the early medieval pattern of secular, religious and funerary sites (Halliday 2006, 24). The only explicit Roman reference to royalty in Iron Age Scotland is the place-name Rerigonium, meaning 'very royal place' (Watson 1926, 34-35), recorded in Ptolemy's geography of the early second century AD and possibly associated with Loch Ryan which may preserve its name (Ordnance Survey 1978, 15; Rivet & Smith 1981, 447). However, there is no credible archaeological evidence to bestow royal status upon any of the known later prehistoric sites within this part of Galloway (Toolis & Bowles 2016, 141 –

Appendix D; contra McCarthy 2004, 125-128). Likewise, in north-east Scotland, radiocarbon dates of the fifth-sixth centuries AD from recent excavations of high-status enclosed sites tally well with the first documented references to Pictish kings (Noble 2016, 31). The development of more complex, nucleated forts in association with an increasingly hierarchical settlement pattern therefore encapsulates a move away from the tribal structures of Iron Age society in Scotland to the confederated kingdoms of the early medieval period. Significantly this was accompanied by the development of royal rituals and connections to European culture as integral elements of political authority as exemplified at Dunadd, Rhynie and Trusty's Hill (Lane & Campbell 2000, 262; Noble et. al. 2013, 1047; Toolis & Bowles 2016, 141 – Appendix D).

Supranational perspective

The re-emergence of fortified high-status hilltop settlements in the Late-Roman and Post-Roman centuries reflects wider social trends apparent across Northern Britain and indeed other areas peripheral to the Roman Empire around the middle of the first millennium AD (Noble et al. 2013, 1144-1145). However, though nucleated fort layouts are apparent in northern Wales and continental Europe, there are none in England (Alcock et al. 1989, 211-213).

Within Northumberland, the regionally prominent site at Bamburgh Castle seems an obvious contender given its identity as the royal stronghold of the British/Anglian kingdom of Berneich/Bernicia in the sixth-seventh centuries AD and the archaeological evidence for Iron Age and subsequent early medieval occupation (Hope-Taylor 1977, 290-291 & 370; Kirton & Young 2017, 148-149 & 196-197). However, a nucleated layout at Bamburgh is yet unproven. Any ramparts that existed here have either been destroyed or obscured by the medieval castle and Victorian renovated structure that now occupy the site. Nor is a nucleated layout apparent at the Anglian settlements at Kirk Hill at St Abb's Head and Castle Park Dunbar (Alcock et al. 1986, 273; Perry 2000, 21-50). Neither are nucleated layouts apparent in any of the numerous hillforts of Northumberland other than perhaps one, Humbleton Hill, though even this is questionable (Harding 2004, 209).

Likewise, none of the descriptions of Cumbrian hillforts conform to nucleated layouts (Lock & Ralston 2017) though the only Cumbrian upland hillfort to be radiocarbon dated, Castle Crag Shoulthwaite, yielded a sixth - seventh

centuries AD date from the base of a rock-cut ditch, suggesting either construction or re-use at this time (Huckerby 1999; Newman & Brennan 2007, 92). There is no evidence of nucleated layouts within hillforts elsewhere in England either, whether in pre-Roman Iron Age or early medieval sites (Alcock et al. 1989, 211).

The complex fort at Cronk Sumark on the Isle of Man has been suggested as a potential nucleated fort (Harding 2004, 209) but whether this is the case is unclear from the description of its layout and it is presently undated (Lock & Ralston 2017). There are possibly three more in north Wales, Dinas Emrys, Castell Degannwy and Bryn Euryn, where the internal non-concentric subdivision of fortified hilltop settlements is apparent, though much simpler in layout than Scottish examples; dating evidence from the former two sites demonstrates occupation in the sixth century AD (Alcock et al. 1989, 211-212). More generally across Wales, a diverse group of enclosed settlements, including re-occupied Iron Age hillforts and *de novo* forts of the fifth-seventh centuries is apparent, which along with evidence for hierarchical relationships between households of differing settlements (Seaman 2016, 41-43) is comparable with the contemporary settlement patterns in Scotland outlined above.

In Ireland where (unlike Scotland) sacral royal sites dating to the Iron Age can be identified (Raftery 1994, 64-81), only at Doonmore in north Antrim has a nucleated layout been postulated (Alcock 2003, 191; McSparron & Williams 2011, 156). While this appears to be part of a cluster of fortified outcrops in north Antrim that have been suggested as analogous to the early medieval duns of Argyll (Ibid., 153-156), the plan of Doonmore is unconvincing and no corroborating evidence for material culture or date of occupation was recovered from its excavation (Childe 1938, 122-135).

The evidence from Ireland highlights similarities and contrasts with early medieval settlement patterns in Scotland. A comparable hierarchical pattern of early medieval settlements, including ringforts (comprising raths and cashels), crannogs, promontory forts and monastic sites is apparent in Ireland from about AD 600 onwards (Comber 2016, 4-5; O'Sullivan 2016, 16). The architecture, particularly the number of enclosing banks and ditches around the earthwork raths, reflects the social ranking of the resident household (Ibid.) Some of the earthwork raths, such as Knowth in County Meath, and multivallate enclosures such as Garranes in County Cork, and

crannogs such as Lagore in County Meath, have been identified as royal sites (Ibid., 17-18 & 24). Perhaps reminiscent of the carefully demarcated entranceways to the summits of Dunadd and Trusty's Hill and the interior of Rhynie, the royal rath at Garranes appears to have been accessed through a complex series of gateways (O'Sullivan & Nicholl, 2010, 67). However, an observed trend for pre-eminent households to construct larger and more heavily fortified drystone cashels does not appear to begin until the ninth century and is perceived, like the emergence of defended *burhs* in Wessex (Christie 2016, 52), as a response to Viking raids and increased militarisation of Irish society (Comber 2016, 12). This is in stark contrast to Scotland where, despite being subject to Viking raiding too, defended settlements became rarer during this time (Noble 2016, 27), suggesting that there is no straightforward correlation between insecurity and the building of fortified settlements, as noted elsewhere (Ralston 1995, 76). Elsewhere in northern Europe, such as that part of Germany between the Elbe and Oder rivers, no forts or strongholds were constructed until after the middle of the eighth century (Biermann 2016, 85) and in Poland not until the middle of the ninth century (Urbańczyk 2016, 95).

It is clear from the accumulating evidence just reviewed that the archaeological record for early medieval settlement across Britain and Ireland undoubtedly reflects regionality, and not just in terms of architecture and morphology. Unlike other areas of Scotland, such as the north-east where a settlement pattern evolved from multiple small foci in the fifth-seventh centuries AD into significantly fewer but larger fortified settlements in the eighth-ninth centuries AD (Cook 2013, 345-346), the development of the settlement pattern in Galloway appears to have been arrested in the seventh century AD. The cluster of small fortified sites in the Stewartry, if adhering to the same pattern encountered at Trusty's Hill and the Mote of Mark, were likely abandoned before the late seventh century AD (Toolis & Bowles 2016, 134 - Appendix D; Laing & Longley 2006, 10 & 22-24).

However, it is important to note that the evidence from Galloway also conforms to international trends, apparent in Ireland, southern Scandinavia and the north-western periphery of the Roman Empire, for the fortification of high-status settlements, particularly during the fifth-seventh centuries AD, intrinsically related to the formation of new political hierarchies in the Late Roman - early medieval period (Noble et al. 2013, 1144-1145). Close analogies have been drawn, for instance, between early medieval fortified

royal sites in Scotland and contemporary high-status central places in Scandinavia where the roles of production, trade and ritual in cementing political authority are implicated in the transfer of authority from kin-groups to a monopoly of power by leading households (Ibid., 1146-1147; Noble 2016, 34). It may be that the development of obligatory places of royal inauguration in Scotland, at fortified sites such as Trusty's Hill and Dunadd, foreshadowed by quite some time similar expressions of consolidating royal legitimacy, such as the fixing of the inauguration of German kings to Aachen from the eleventh century onwards; so that to be a legitimate king of Germany, one had to be crowned in Aachen (Rollason 2016, 324-326). The source of this was not its strategic significance but its association with Charlemagne. This is also observed at other medieval seats of royal inauguration such as Westminster with its links to Edward the confessor, Prague and its connections with St Wenceslas ancestor to the kings of Bohemia, and Reims and its association with St Remigius and his baptism of Clovis the first Christian king of the Franks (Ibid., 327-329). It may be pertinent to then consider the evidence for earlier Iron Age occupation at Trusty's Hill and the stratigraphic evidence for the rock-cut basin there preceding the formal demarcation of the entranceway associated with the early medieval fort (Toolis & Bowles 2016, 105 – Appendix D). For it may be a similar association with an illustrious past that made Trusty's Hill a royal inauguration site in the sixth century AD. Certainly the site does not occupy the same prepossessing landmark as other early medieval royal strongholds in Scotland, such as Dumbarton Rock and Edinburgh Castle Rock nor does it occupy an especially strategic location. The association with an illustrious mythical past is what appeared to bestow legitimacy upon the Iron Age and early medieval royal inauguration rites at Tara in Ireland, for despite the bountiful written evidence for its association with kingship there is no firm archaeological evidence for anything there later than the early fifth century AD (Rollason 2016, 331-335). Given the effort to accommodate what survived from the past at Tara, some measure of the power of the kings of Tara was owed to that link with the past there (Bradley 2002, 145). An appropriation of an illustrious mythical past, that of Magnus Maximus, renamed Macsen Wledig, was also important to legitimising the power of numerous medieval Welsh dynasties who linked their genealogies with him (Ibid., 120). This was used against them by Edward I to emphasise his sovereignty, in the choice of architecture for Caernarvon Castle to the

fortuitous discovery of the body of Magnus Maximus and his subsequent burial at the instructions of Edward, in the year in which the Welsh were defeated (Ibid., 120-121).

Along with their much earlier origins, what marks out royal inauguration rites in Scotland and Ireland from those elsewhere in Europe, however, is the use of outdoor inaugurations that appear to predate Christian rites (Rollason 2016, 331-337). Given the associations drawn between the use of shoes in Irish kingship inauguration and the carved footprint at Dunadd (Lane & Campbell 2000, 247-249), it is tempting to imagine the rock-cut basin at Trusty's Hill being used for a ritual similar to the bathing of a newly anointed Irish king in the broth of a horse butchered during the inauguration ceremony, as described by Gerald of Wales (Rollason 2016, 341).

There is no evidence, however, to suggest any direct influence between royal rites in Scotland, Ireland or any of the other European countries. Nor is there any evidence that the apparently hierarchical division of early medieval fort-interiors on the Continent influenced the construction of nucleated forts in Scotland (Alcock et al. 1989, 211-213; Alcock 2003, 191). Much like the matching traits for fortified royal sites apparent across Scotland (Toolis & Bowles 2016, 138 – Appendix D) these are probably best considered as independent responses to analogous political circumstances using a related vocabulary. Similarly, the deliberate destruction of many of the early medieval royal strongholds in Scotland may correlate with the burning of a significant portion of Bronze Age hillforts in Ireland, also observed across Central Europe, where it is proposed that the punitive slighting of symbolic centres of power was intended as visible statements of victory over subjugated communities (O'Brien & O'Driscoll 2017, 408 & 414; O'Brien et al. 2018, 75-77).

The equivalence that can be drawn between the material culture, architecture, layout and inauguration features at Trusty's Hill and those at other royal sites in Scotland that can also be dated to the sixth-seventh centuries AD (Toolis & Bowles 2016, 136-141 – Appendix D) nevertheless implicitly suggests shared cultural traits across the country, regardless of the perceived ethnicity of the various regions occupied by Britons, Picts and Scots. This emphasises how the evidence in Galloway adheres to national trends and not simply in relation to the chronology and clustered distributions discussed above. The fact that many of these cultural traits are unique to

Scotland should not be overlooked. For the distribution of nucleated forts across Scotland in contrast to England where these are absent (Figure 18), is by no means the only manifestation of early medieval culture specific to the peoples of Scotland (Figure 19). Pictish symbols, whether carved on stone or inscribed upon artefacts, are unique to Scotland. Significantly, while these are concentrated north of the Forth, they are also encountered within non-Pictish contexts to the south and west specifically associated within the same royal contexts as nucleated forts (Toolis & Bowles 2016, 136-140 – Appendix D). The direction of influence was not one way however. Silver chains, which are also unique to Scotland, are concentrated in the south-east of the country reflecting their cultural origin here, the result of the appropriation of Roman silver as a means of expressing status and power in an increasingly hierarchical society (Hunter 2013, 7). That silver chains are also found north of the Forth demonstrates yet again mutual cultural values in the expression of power and prestige amongst the Britons of southern Scotland and the Picts of northern Scotland.

That is not to say that cultural values were not shared between the peoples of Scotland and other parts of Britain and Ireland. For example, the series of fifth and sixth century Latin inscribed stones from Vindolanda, Maryport, Brougham and Old Carlisle appear to belong to the distribution pattern of Latin inscribed stones across southern Scotland and are therefore intrinsically part of the same Romano-British Christian culture (Dark & Dark 1996, 60-62; McCarthy 2002a, 134-137), though their absence in north-east England emphasises the cultural nature of the divergence between Christian communities in the Celtic west and pagan communities in the Anglian east (Figure 19). The re-use and de novo construction of crannogs during the early medieval period is apparent across Scotland but crannogs were also being constructed at this time in Ireland too (Crone 2012, 150 & 162). Indeed, the same broad attributes that distinguish royal sites in the fifth-seventh centuries AD from contemporary elite settlements are apparent across Celtic Britain and Ireland (Table 2).

The shared cultural traits, such as the fortification of elite settlements where production, trade and ritual were used to consolidate political authority, that can be observed across Britain, Ireland and indeed many parts of northern Europe during this period, do not negate the significance of nucleated forts, Pictish symbols and silver chains in defining profound cultural expressions of power and prestige unique to Scotland.

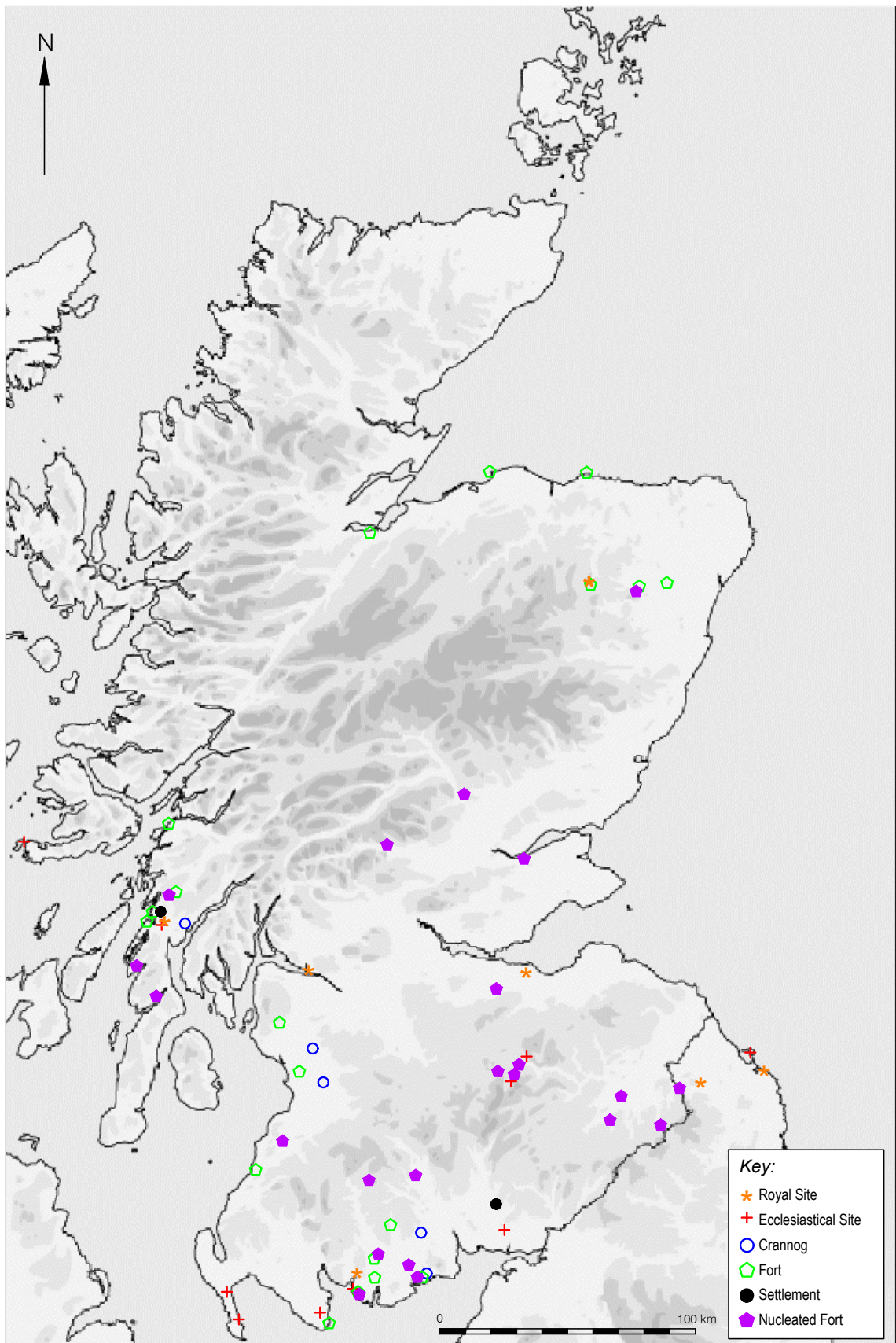


Figure 18: Map of nucleated forts and associated early medieval sites (prepared with assistance from Jennifer Simonson)

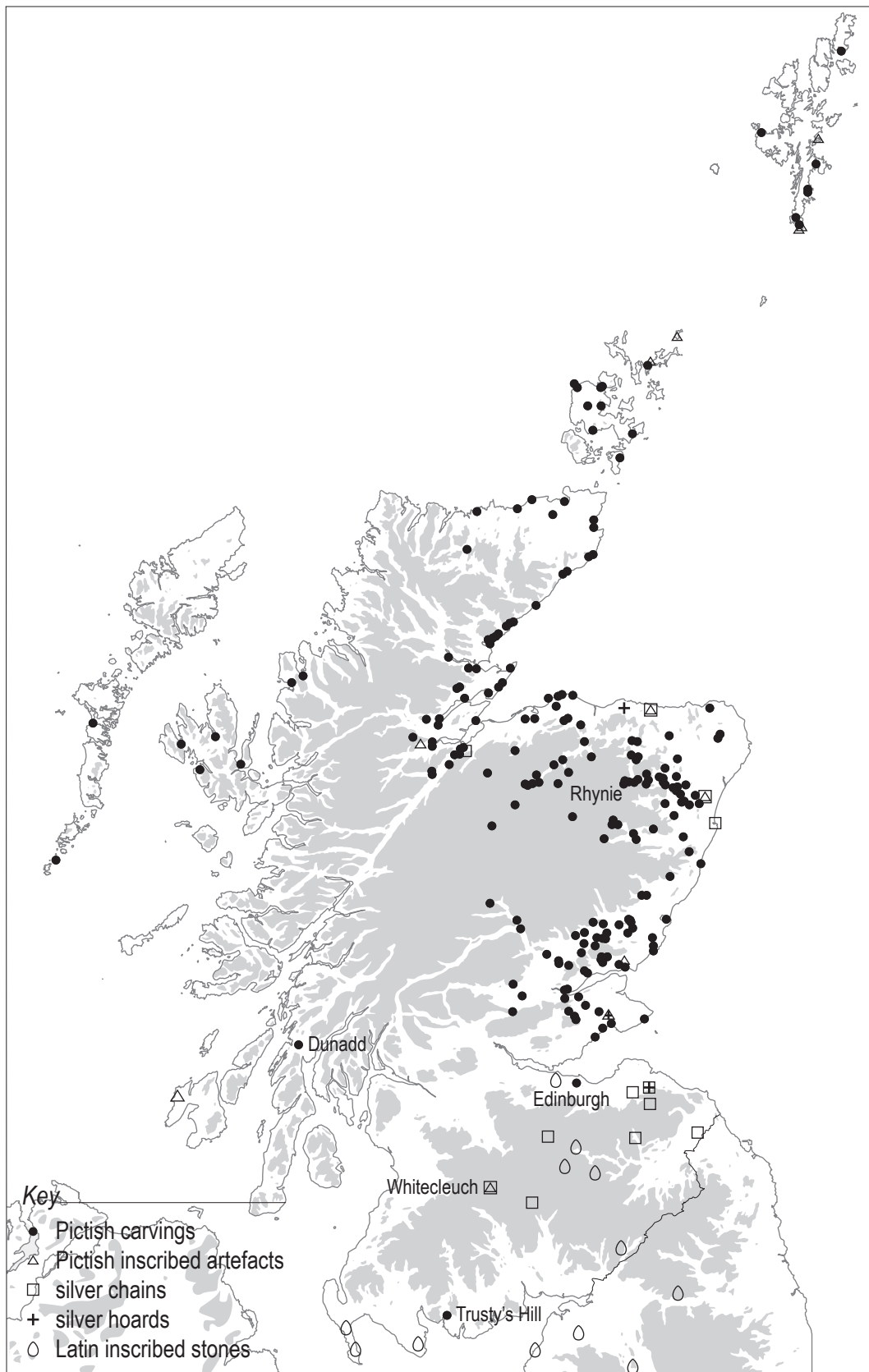


Figure 19: Map of Pictish symbols, British silver chains and Romano-British Latin Inscribed Stones across Scotland and Northern England (prepared with assistance from Gillian McSwan)

These archaeological manifestations distinguish the early medieval culture of Scotland from these other European cultures and demonstrate the parallel evolution of analogous political cultures across north-western Europe.

Chronological perspective

The validity of drawing comparisons between the early medieval and preceding Iron Age settlement patterns of Scotland is borne out by the evidence that at least some of the early medieval forts, such as Dunadd, Edinburgh Castle Rock and Traprain Law, had continued to be inhabited in a largely unbroken sequence of occupation phases from the early centuries BC/AD right through into the early medieval period (Lane & Campbell 2000, 97; Driscoll & Yeoman 1997, 26 & 228; Hunter 2013, 6-7; contra Halliday 2006, 24). For, as discussed in Chapter 6, the archaeological evidence suggests that the origins of Scotland's cultural divergence from the rest of Britain at least began during the Iron Age. A swathe of architectural forms, such as brochs and crannogs, are absent south of the Anglo-Scottish border (Armit 2003, 25; Morrison 1985, 4; Dixon 2004, 26; Crone 2012, 140; Toolis 2015, 19-20; Appendix E). To these might be added duns and souterrains. Though the distribution of these architectural forms across Scotland is uneven, and due in part to environmental factors (*Ibid.*), to ascribe this simply to regional cultural diversity within the country does not reveal the whole picture.

From a wider perspective, the underlying implication of these distribution patterns which do not extend south of the Cheviots is that Iron Age societies *across* Scotland were open to the building and occupation of brochs, crannogs, duns and souterrains but that Iron Age societies further south were not. Souterrains, for instance, though undoubtedly more common to the north of the Forth, are also present in southern Scotland and on the Atlantic seaboard too (Harding 2004, 199). However, though the souterrains at Castle Law in the Pentland Hills and at Newstead in the Scottish Borders are likely to be no earlier than the late second century AD (Childe 1933, 386; Halliday 2006a, 15), the souterrain at Cults Loch in Galloway originated in the last two centuries BC (Cavers & Crone 2018, 181). This demonstrates that the southern souterrains do not derive uniquely from a late spread emanating from the north-east. Instead, they are part of the same cultural and economic pattern of accruing food surplus stemming from the intensification of farming, a process that pollen analyses indicate began in

the last centuries BC (Ibid.; Tipping 1997, 20). There are no environmental reasons why equivalent structures are not found to the south until one reaches Cornwall.

Likewise, there are no environmental reasons for why brochs are only found in Scotland. While there is no reason to doubt the origins of brochs from the development of complex Atlantic roundhouses in northern Scotland during the latter centuries BC (Armit 2003, 51-54), the brochs of southern Scotland, which date to the early centuries AD, are not a homogenous group of sites distinct from the brochs of Atlantic Scotland (Macinnes 1984, 235-236). A similar pattern of materially wealthy broch households is apparent in central and southern Scotland, at sites such as Torwoodlee, Leckie and Buchlyvie brochs (Piggott 1953, 105-118; MacKie 1982, 62-64; MacKie 2016, 73-117; Main 1998, 320-401) as in northern Scotland, at sites such as Scalloway and Dun Vulan (Sharples 1998, 89-186; Parker Pearson & Sharples 1999). Though not nearly as comprehensively excavated, Galloway brochs such as Teroy and Crammag Head have yielded evidence to demonstrate that their households too had access to Roman goods (Hunter et al. 2018, 216). There is also as much variety amongst southern brochs as there is amongst northern brochs; idiosyncratic features within some of the Galloway brochs, for instance, such as double entrances and staircases and diminutive internal floor areas, are architecturally analogous with brochs in Atlantic Scotland (Cavers 2008, 16). While some lowland brochs, such as Edin's Hall, are likely associated with multiple household settlements (Dunwell 1999, 351), comparable with (though not identical to) northern broch villages such as Gurness (Armit 2003, 127), others are discrete single household settlements, like the majority of Atlantic brochs. Even then brochs like Teroy and Bow Castle that occupy prominent enclosed hilltops seem hardly the same as Doon Castle and Stairhaven that cling to the Galloway coast on precariously overlooked locations. These latter sites, it might be observed, are little different from Galloway promontory forts like Carghidown, which may itself have contained a two-storey timber roundhouse (Toolis 2007, 302; Appendix B). The brochs of lowland Scotland reflect cultural choices consistent with settlement patterns elsewhere in the country (Romankiewicz 2016, 12) but not noted in England. The same is apparent for crannogs, dating from around the middle of the first millennium BC across both northern and southern Scotland (Crone 2012, 140-149). So too can an equivalence be drawn between the scattered distribution of small stone-walled settlements across

south-west Scotland and Perthshire, the ringforts of north-east Scotland and that of the duns of north-west Scotland (Cavers 2008, 18; Harding 2004, 238-240; Noble 2016, 29) but not again recorded south of the Tweed or Solway (Ibid., 29-53 & 160-170; McCarthy 2000, 136-137). It is also puzzling why in Cumbria and northern Lancashire, despite being predominantly upland areas, there are very few hillforts (Hodgson & Brennand 2006, 52).

This is not to suggest an impermeable cultural boundary. This is demonstrated by those forms of settlement, such as rectilinear settlement enclosures, spread across southern and eastern Scotland as well as northern England, though even where regional architectural and material culture such as 'Votadinian' houses, Tyne-Forth pottery style and patterns of hoarding can be identified, these tend to lie north of the Tyne (Armit & Ralston 1997, 179; Morris 2016, 211; Hunter 1997, 110-115).

However, it is not simply the analogous divergence between Iron Age and early medieval settlement patterns north and south of the Anglo-Scottish border that is of relevance to a chronological perspective of nucleated forts. Brochs and duns in lowland Scotland are noticeably distributed in clusters: within a 700 km² area around the Forth Valley; a 600 km² area around the Firth of Tay, and a 400 km² area in the Rhins of Galloway (Figure 20). The brochs at Torwoodlee and Bow Castle in the Scottish Borders are separated by 40 km from Edin's Hall. Each of these clusters is separated from each other by distances of between 70 and 160 km. It could be observed that these first-second century AD clusters are markedly similar in scale to the predominant 400-700 km² size of clusters of elite sites belonging to the sixth and seventh centuries AD (Figure 18).

This is not to suggest that any of these brochs or duns in lowland Scotland are directly related to or equivalent to nucleated forts. At no nucleated fort are the underlying remains of a broch apparent. Although wealthy assemblages of in-situ material culture have been recovered from brochs such as Torwoodlee, Leckie and Buchlyvie, the combination at these sites of catastrophic destruction events and optimal preservation conditions undoubtedly lends a bias to comparisons with assemblages recovered from enclosed settlements such as Carghidown, Woodend and Braehead for instance (Toolis 2007, 282-291 – Appendix B; Banks 2000, 257-263; Ellis 2007, 204-229) where less optimal conditions for survival prevailed. Furthermore, comparable levels of material wealth may have been enjoyed

by other nearby but less well-preserved duns and crannogs (Main 1998, 408) and by communities inhabiting multiple household settlements such as Traprain Law, Burnswark and Dunagoil (Hunter 2013, 6-7; Jobey 1978, 82-96; Harding 2004, 141-144).

It is therefore not evident that broch households held an equivalent status to that of nucleated forts and other early medieval elite sites during their respective periods. Indeed, it is doubtful that every broch, whether in the south or north, was of equally high status (Armit 1997a, 266-269; Armit 2003, 81-85; contra Parker Pearson & Sharples 1997, 262-265).

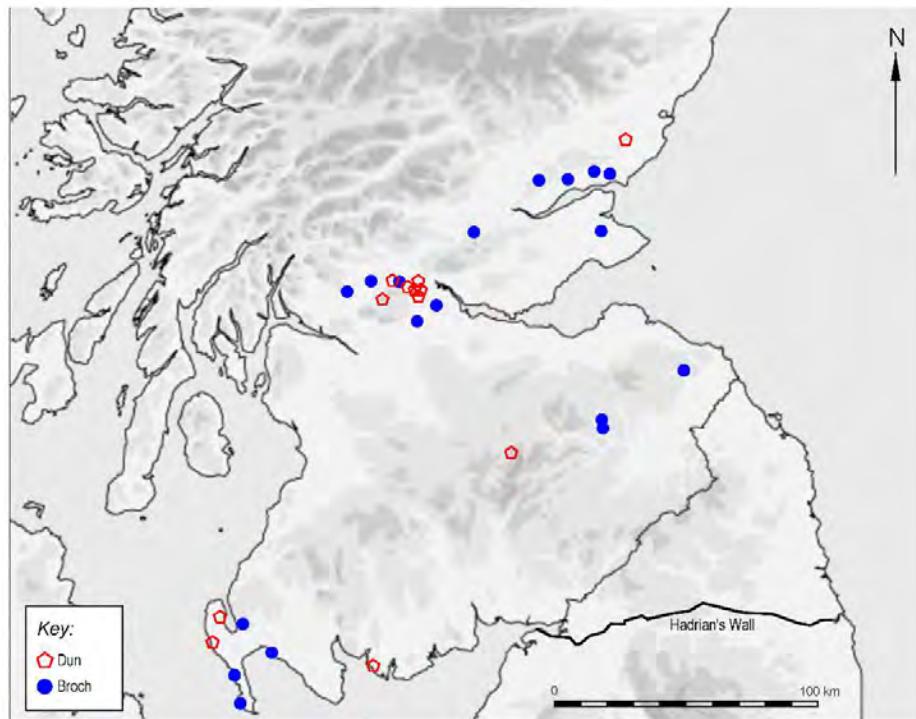


Figure 20: Map of brochs and duns across lowland Scotland (prepared with assistance from Jennifer Simonson)

Nonetheless, the archaeological evidence from Torwoodlee, Leckie, Buchlyvie and Edin's Hall suggests the presence of wealthy and prominent (if not necessarily pre-eminent) households during the early centuries AD, who chose to define their households with monumental architecture distinctive to Scotland. Nor were they generally alone amongst their neighbouring households in doing so. The cultural clusters of prominent households within 400-700 km² areas during the first two centuries AD (Figure 20) may represent an Iron Age precursor to the comparably sized cultural clusters of pre-eminent households that emerged in the fifth-seventh

centuries AD (Figure 18). It may even be that the cultural clusters of early medieval elite settlements reflect how society in Scotland was replicating a process of households accruing power and status that had been arrested in development (either because of Roman aggression or internal social upheaval) during the early centuries AD (Macinnes 1984, 244).

Conclusions

By examining the evidence from a variety of local, regional, national and chronological perspectives, an attempt has been made to achieve a balanced sense of perspective to better understand the later prehistoric and early medieval settlement record of Galloway. As a result, nucleated forts such as Trusty's Hill may be considered as significant cultural expressions of power and prestige unique to early medieval Scotland, and part of a range of archaeological evidence that suggests profound cultural divergence between peoples north and south of what later became the Anglo-Scottish Border.

While it might be tempting to attribute this to a lasting effect of the Roman Frontier, the archaeological record suggests that this divergence predates the coming of the Romans. For like nucleated forts, it is noteworthy that the array of earlier brochs, duns, crannogs and souterrains across Scotland was not chosen by Iron Age communities in northern England or further south. This divergence was the result of cultural choices taken by households and communities, not environmental constraints, and suggests markedly different Iron Age societies north and south of the Tweed-Solway line. These distinctive differences in the archaeological record are especially significant because the construction of crannogs and souterrains during the fourth-second centuries BC demonstrates cultural divergence in the Iron Age long before the Roman frontier zone may have severed societies. In fact, the boundary of this cultural divergence does not equate with the line of Hadrian's Wall (Figures 18-20). Hadrian's Wall instead perhaps follows the best strategic course through a zone of cultural divergence.

The underlying reasons for this cultural divergence are not clear. While some households, such as occupied the brochs at Leckie, Buchlyvie and Torwoodlee appear to have had ready access to Roman goods, others communities such as those occupying Edinshall broch or the enclosed settlement at Woodend do not. Whether this was the result of Roman patronage or indigenous rejection, or even archaeological preservation and

sufficiently comprehensive investigation, is difficult to presently assess. It is unlikely that any process of 'Romanisation' developed at the same rate, to the same extent, or amongst all social groups (Fernández-Götz, M 2014, 238-239), but evidence for Roman aggression at Leckie for instance (Mackie 2016, 15) appears to demonstrate that even for a household with access to Roman goods, this process was not plain sailing. The failure of the Roman Empire to consolidate its conquests of Scotland is often attributed to the changing political and military priorities of Rome (Breeze 1996, 96-102). However, clear evidence for 'Romanisation' does not appear to occur in Scotland until the fifth century, after Roman administration of the provinces of Britain had ceased, when Latin-inscribed stones, bearing Latinised names of indigenous inhabitants and Christian terminology and symbols, are distributed across southern Scotland (Figure 19). This would therefore imply that far from being passive participants in acculturation, it was only with their active participation and likely at their own instigation, that communities in Scotland adopted aspects of Roman culture. The archaeological evidence therefore suggests that the northern Roman frontier in Britain was not the cause but instead the effect of cultural divergence between the peoples of what later became Scotland and England.

Priorities for future research

Given the results of the modern re-excavation of Trusty's Hill, the targeting of some previously partially excavated sites in Galloway, such as Teroy Broch or Castle Haven, may produce results that address the apparent material poverty of Iron Age settlements within the region and establish a more coherent chronology for sites and by extension of settlement patterns. Whilst recognising a growing number of radiocarbon dates from crannogs in Dumfries and Galloway and research integrating wetland and dryland sites in the region, a much wider range of dryland sites requires radiocarbon dating of single entity samples of appropriate species to refine the corpus of reliably dated settlements across the region. This proposed strategy may be probably the most cost-effective way of beginning to understand later prehistoric and early medieval settlement patterns in Galloway, given the cumulative results in other regions of Scotland where this approach has been adopted. In Aberdeenshire, keyhole excavations have supplemented large-scale area excavations to yield a suite of reliable radiocarbon dates that show how settlement across the later prehistoric and early medieval landscape was not homogenous or evenly distributed (Cook & Dunbar 2008; Cook

2011). While keyhole excavations may be unable to offer nuanced chronologies in some cases at least, the small trenches on the east and west sides of the summit of Trusty's Hill demonstrate the potential to reveal stratigraphic sequences that corroborate each other and therefore offer dating evidence that could be applied to the entire summit (Toolis & Bowles 2013, 44; Appendix C). A similar approach in Galloway to that pursued in Aberdeenshire may also reveal patterns of contraction and expansion of differing forms of settlement across the landscape (Toolis 2015, 27; Appendix E).

Drawing comparisons with the sustained research undertaken in the eastern part of East Lothian (Haselgrove 2009; Armit & Mackenzie 2013) and Strathdon in Aberdeenshire (Cook 2011), there are three particular districts of Galloway where future research might be better focussed on, building on clusters of fieldwork already undertaken - the Machars, the East Rhins and the southern Stewartry - and where some measure of local context can therefore be applied (Toolis 2015, 27; Appendix E). For instance, excavation of some of the other nucleated and vitrified forts in the southern Stewartry may clarify the local context of Trusty's Hill and the Mote of Mark, establishing a more comprehensive regional chronology for the development of these complex hillforts and examining the distribution of material culture to explore potential relationships between households. Likewise, the excavation of selected prominent sites in the Machars, such as Isle Head promontory fort and Fell of Barhullion hillfort may clarify the local secular and chronological context for the development of the early medieval monastic settlement at Whithorn. Furthermore, the excavation of a settlement that has undergone a catastrophic destruction event preserving in situ the layout and contents of a household, as encountered elsewhere in Scotland, may radically alter our perception of the material culture of later prehistoric Galloway.

Such work is necessary to not only overcome the ephemeral and tenuous distinctions currently drawn between the sheer variety of sites to better illuminate the distinctions that Iron Age people themselves may have made between different settlements. Only excavation can draw out the cultural aspects of settlement patterns from underlying geographical and environmental factors. So, for instance, would Iron Age communities have differentiated between single household settlements containing different architectural forms of monumental roundhouses or enclosed by differing

forms of boundaries? Would they have differentiated single household settlements from multiple household settlements? More importantly, can archaeological evidence actually address such questions? Can the chronology, duration, internal development and material culture of occupation (and nature of abandonment) of a range of individual settlements enable the recognition of differing or comparable cultural traits and thus allow meaningful settlement patterns to emerge in the archaeological record?

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Appendices – portfolio of publications

***Appendix A: A survey of the promontory forts of the
north Solway coast***

Transactions
of the
Dumfriesshire and Galloway
Natural History
and
Antiquarian Society

FOUNDED 20th NOVEMBER, 1862

THIRD SERIES VOLUME LXXVII

Editors:

JAMES WILLIAMS, F.S.A.Scot.,
R. McEWEN

ISSN 0141-1292

2003

DUMFRIES

Published by the Council of the Society

A SURVEY OF THE PROMONTORY FORTS OF THE NORTH SOLWAY COAST

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Abstract

This paper presents the results of a survey of promontory forts on the Solway Coast of Dumfries and Galloway. This work was carried out by the author primarily to determine the extent and nature of erosion affecting these sites. The surveying programme also attempted to determine morphological and topographical traits that might clarify aspects of the nature of occupation of the Galloway promontory forts. Sixteen sites were surveyed between 1996 and 1997. A further survey took place in 1999 and 2000 as part of the pilot 'Shorewatch' Scheme. The resulting site plans provide a baseline of data from which future assessments may measure the condition of these sites and develop appropriate research and conservation priorities.

Introduction

A programme of site surveys of sixteen promontory forts was instigated by the author in 1996 following the *Coastal Assessment Survey of the North Solway Coast* commissioned by Historic Scotland and carried out by the Centre for Field Archaeology in 1996 (Cressey & Toolis 1997). The selection of promontory forts as a subject for survey followed the identification of this class of site in the *Coastal Assessment* as a distinct site pattern within the general corpus of archaeological sites on the North Solway Coast (Cressey & Toolis 1997, 474-476). While the monuments of the post-medieval and modern periods on the Solway Coast are almost exclusively of an industrial, maritime or military nature, the coastal monuments of the Iron Age and early medieval period, represented largely by promontory forts, are places of settlement located generally on the seaward limits of high ground. Promontory forts appear then to offer a marked contrast with the settlement record of the medieval period onwards, during which this geographical setting seems to have been much less favoured. The threat of localised coastal erosion at many of these sites, together with the impact of agriculture, development and tourism, led to the recommendation within the *Coastal Assessment* for a further programme of surveying and monitoring (Cressey & Toolis 1997, 476).

Following this initial assessment and its recommendation, the author prepared a surveying and monitoring programme. The same sample area of the Dumfries and Galloway coastline was chosen for further detailed site surveys. Of the 49 promontory forts on the coastline of Dumfries and Galloway, 25 are located on the North Solway Coast, defined here as the coastline between the Mull of Galloway and the River Sark (Figure 1). From this number, 16 were selected for site surveys, the rest being deemed either inaccessible due largely to excessive vegetation, unnecessary due to previous investigation or in the case of Port O'Warren (NMRS: NX85SE 2) no longer possible due to previous development.



Figure 1: Distribution Map of Promontory Forts on the Galloway Coast showing sites selected for survey on the North Solway Coast.

The author carried out the programme of site surveys between October 1996 and August 1997. Further repeat surveys of one of the sites was carried out by the author in December 1999 and February 2000 as part of the pilot Shorewatch Scheme, administered by the Council for Scottish Archaeology and funded by Historic Scotland. The preparation of this paper was partially funded by Historic Scotland.

Background

Promontory forts can be classified as sites of varying size, on the tip of a hill, spur or cliff, with a barrier of varying construction and dimensions across the line of easiest approach, while the other sides of the site rely on the natural steepness of the slope or cliff (Bray & Trump 1982, 200).

The distribution of coastal promontory forts in the British Isles is restricted to geographical clusters, predominantly on the western and northern seabords (Lamb 1980, 5). Within Scotland, promontory forts can be found on the coastlines of Berwickshire, Angus, Moray, Caithness, Orkney, Shetland, the Western Isles and Galloway. On the western seaboard south of Galloway, promontory forts are distributed along the coastlines of the Isle of Man, Pembrokeshire, Cornwall and Brittany and along the west coast of Ireland. Some have insisted that their restricted distribution suggests that promontory forts represent a tradition in themselves and are not just a local brand of hillfort on a coastal site (Lamb 1980, 6) but the distribution pattern may simply represent the distribution of suitably incised coastlines within which promontories are formed (Cunliffe 1991, 340-1). Promontory forts, it should be added, are not exclusively found on coastal sites either as inland promontory forts are found throughout Scotland, Wales, Ireland and England (Proudfoot 1980, 112; Taylor 1982, 215; Rideout 1996, 199; Perry 2000, 27; Arnold & Davies 2000, 74 & 159; Raftery 1994, 45-46; Cunliffe 1991, 340). Dumfries and Galloway is no exception with examples such as Carminnows fort (NMRS No. NX69SW 8) and Drummoral fort (NMRS No. NX43NE 1). The distribution of promontory forts within the British Isles, as a group, probably represents no more than the use of suitable, easily defined sites within the landscape, similarly distinctive in topographical setting as hillforts and crannogs, but not necessarily a cultural indicator.

The first survey of promontory forts on the North Solway Coast was carried out in 1890, as part of a general survey of later prehistoric and medieval field monuments in the Stewartry of Kirkcudbright (Coles 1891; Coles 1892; Coles 1893). The first measured plans of a selected number of promontory forts on the Stewartry coast were produced by Coles in this survey and have enabled a tentative comparison of coastal erosion to be made with the present survey site plans. The Royal Commission on Ancient and Historical Monuments of Scotland (RCAHMS) carried out a marginal land survey of a wide variety of archaeological sites and monuments in the 1950's (RCAHMS 1955; Feachem 1956), which produced further site plans, again enabling a measured comparison to be made of coastal erosion at a selected number of promontory forts.

Excavations of promontory forts on the North Solway Coast have been limited to three, rather unrepresentative, sites. The first site, McCulloch's Castle, does not occupy a promontory but lies at the edge of a straight coastal cliff. This semi-circular ditched enclo-

sure, excavated between 1962 and 1963 (Scott-Elliot 1964, 118) nonetheless occupies a comparable location and therefore warrants attention. The excavations revealed a secondary stone wall crowning the earth rampart that defined the site and a possible gateway between the cliff edge and the western terminus of the rampart ((Scott-Elliot, 1964, 121). The interior of the site was heavily disturbed by an early 20th century ornamental garden at the site (Scott-Elliot 1964, 119). Therefore, while a large number of post-holes were revealed, no structures could be identified within the interior of the fort (Scott-Elliot 1964, 123). The only demonstrably original feature within the interior of the site was a hearth, from which a sherd of mid 2nd Century AD Samian Ware was recovered (Scott-Elliot 1964, 123).

Cruggleton Castle, a seat of the early Lords of Galloway, was excavated between 1978 and 1981 in response to coastal erosion (Ewart 1985, 6). The earliest occupation of the site was represented by the partial remains of a roundhouse, with a probable diameter of c. 8 m, from which a radiocarbon date of AD 50 \pm 70 was recovered (Ewart 1985, 12-14). The next phase of occupation was represented by a timber hall, dated to the mid-8th century AD (Ewart 1985, 18), subsequently altered and extended during the 12th century while the site was transformed into a motte (Ewart 1985, 18-22). A stone castle with a curtain wall was developed and altered from the late 13th century until the mid-17th century when the site was finally abandoned (Ewart 1985, 12). In addition to the radiocarbon date from the roundhouse, a bronze bow brooch of the mid-1st to mid-2nd century AD (Caldwell 1985, 64), albeit from a disturbed context, provided further evidence of Iron Age occupation and led the excavator to interpret the origins of Cruggleton Castle as a promontory fort (Ewart 1985, 14), although one must assume that the subsequent occupation of the site had removed the original defining ramparts.

More recently an exploratory excavation was carried out at the Mull of Galloway to investigate the two linear earthworks that cross the headland either side of the narrow isthmus between East and West Tarbet bays (Strachan 2000). This investigation revealed a set of closely spaced multivallate linear inner earthwork ramparts and a mixed stone and earth dump linear outer rampart (Strachan 2000, 3-4). Unfortunately no dating evidence was recovered and while comparisons have been drawn between the morphology of the closely spaced multivallate ramparts at the Mull of Galloway and Iron Age promontory forts in Ireland such as Knockdhu and Lurigethan (Strachan 2000, 30-31), it is difficult to make comparisons, in terms of scale and morphology, with other promontory forts on the Galloway Coast. The location of a cairn near the tip of the Mull and the recording of numerous early prehistoric artefacts, including a Neolithic polished stone axe (NMRS No. NX13SW 25), a black flint spearhead (NMRS No. NX13SW 34) and a green chert arrowhead (NMRS No. NX13SW 36) in close proximity to the earthworks, along with flint scatters detected within the area enclosed by the earthworks (Pickin pers comm.) indicate that occupation of the Mull of Galloway originates much earlier than the Iron Age.

Previous excavations of promontory forts elsewhere in the British Isles have yielded a more extensive array of information. Burghead on the Moray coast stands out within Scotland as a large, strongly fortified, high status site with ready and immediate access to the sea and occupied from the 3rd century AD until the 9th century AD (Small 1969, 67;

Edwards & Ralston 1980, 207; Alcock 1988, 26; Ralston & Armit 1997, 225; Foster 1998, 11). A smaller, though strongly fortified, site on the Moray coast, with ready access to the sea is Green Castle, Portknockie, where excavations revealed a 6 m wide timber laced rampart, which provided dates indicating occupation of the site during the 7th and 8th centuries AD (Ralston 1980, 32). The excavation of Cullykhan provided evidence of an elaborate defence and entrance passage, leading into an industrial area of iron and bronze working, later overlaid by a timber-laced rampart (Ralston 1980, 37). Less elaborate, stone faced ramparts of rubble and earth were exposed at Broch of Burland and Ness of Burgi, Shetland, which yielded a tentative Iron Age date, (Carter et al. 1995, 466 & 446), while simple earth and rubble banks were revealed by excavations at Scatness (Carter et al. 1995, 435). The excavation of Fort Vowlan on the Isle of Man provided evidence of a series of small rectilinear buildings, probably occupied during the late first millennium AD (Bersu 1949, 62-75). Excavations at Coygan Camp in Carmarthenshire, Wales provided evidence of episodic occupation from the Mesolithic period until the middle of the first millennium AD (Wainwright, 1967, xii; Arnold & Davies, 2000, 74). Dunbeg promontory fort in Co. Kerry, Ireland provided radiocarbon dates from the early first millennium BC to the late 10th or early 11th centuries AD (Barry 1981, 324) as has Cnoc a Chaisteal in Easter Ross (Rideout 1987, 63) while Drumanagh yielded a Roman potsherd of the first century AD (Raftery 1994, 48).

Evidence of multiperiod occupation of varying 'status' within coastal promontories defined by a range of different forms of barriers, from at least the 1st millennium BC onwards, if not earlier (Wainwright 1967, 16; Sharpe 1992, 66-68), is therefore not exceptional. Parallels can be drawn, for instance, between Cruggleton Castle and Castle Park, Dunbar, where evidence gathered from excavations have revealed an original Iron Age site being re-occupied later in the first half of the first millennium AD (Perry 2000, 21-29) and reoccupied again as a royal Anglian site (Perry 2000, 319) and later in the medieval period. Hence the multi-period occupation at Cruggleton Castle, with its origins in the late Iron Age and subsequent re-occupation from the 8th century AD onwards is by no means exceptional though nonetheless a locally significant aspect of an historically attested high status site.

However, while the evidence accumulated from McCulloch's Castle, Cruggleton Castle and the Mull of Galloway corresponds broadly with the chronology of occupations established at other sites within the British Isles, not one of the Galloway sites has provided substantial evidence for the nature of the original construction, occupation and function of promontory forts within a local context. Furthermore, of the three excavated sites, only McCulloch's Castle offers easy comparison, in terms of site morphology, with other promontory forts on the Galloway Coast.

Objectives

In an effort to establish more information on the morphology and condition of the Galloway Coast promontory forts *as a group*, the objectives of the survey comprised:

- (i) creating an accurate measured plan of each selected site and reviewing morphological and topographical traits

- (ii) measuring the extent of areas within each site affected by erosion
- (iii) determining the cause of erosion of each site
- (iv) presenting this information as a baseline of data from which future assessments may measure the condition of each selected site and appropriate management strategies be implemented
- (v) developing further research and conservation priorities on the basis of the results of the survey.

Survey Method

The site surveys were carried out using EDM surveying equipment. Survey works established temporary stations both within and outwith each site. All data were recorded and plotted manually on graph paper at a scale of 1:200 or 1:400. The resulting plans, together with earlier, comparative plans, were then scanned, reduced to identical scale and prepared for publication using Adobe Illustrator. It should be noted that while the earliest site plans, produced by Coles (1892 & 1893) offer to some extent comparison with the latest site plans, Coles did not claim absolute accuracy for his plans (1891, 354), only for his measurements. The measurements within his site plans have therefore been adhered to rather than simply the plan. It has been assumed, however, that the plans produced by RCAHMS during the 1950s are sufficiently accurate to be taken at face value.

Results

The results of the programme of survey are detailed below and comprise a description of each site, its topographical location, its condition, extent of erosion and plan. Inter-visibility between sites was also noted, although as only one team carried out the work, the observations made are only tentative. The results are arranged in order from west to east.

Garliachen, Laigh Sinniness (NX 2157 5219)

Garliachen, Laigh Sinniness is a multivallate fort comprising an outer earth and stone rampart (1) and an inner drystone rampart (2), both utilising to a great extent natural outcrops of rock, which enclose a promontory roughly 450 m² in size, bounded on the east, south and west by cliffs (Figure 2). The inner drystone rampart has been reduced to ground level and survives only as a 'stony foundation'. Corresponding gaps, around 2 m wide, between rocky outcrops within each rampart line, close to the western side of the site, appear to define the original entranceway. No trace of an outer ditch recorded in 1911 (RCAHMS 1912, 112), nor traces of internal structures, are evident.

The site lies on a shallow till cover over precipitous greywacke cliffs (Cressey & Toolis 1997, 70) at a height of approximately 20 m above sea level. The land to the north is improved land with a gentle slope down to the site from a distance of about 400 m. Garliachen promontory fort overlooks a small shingle bay on the eastern side. There is a limited view of the coastline north and south of the site, but like all the promontory forts on the west coast of the Machars, the east coast of the Rhins of Galloway is clearly visible from Garliachen.

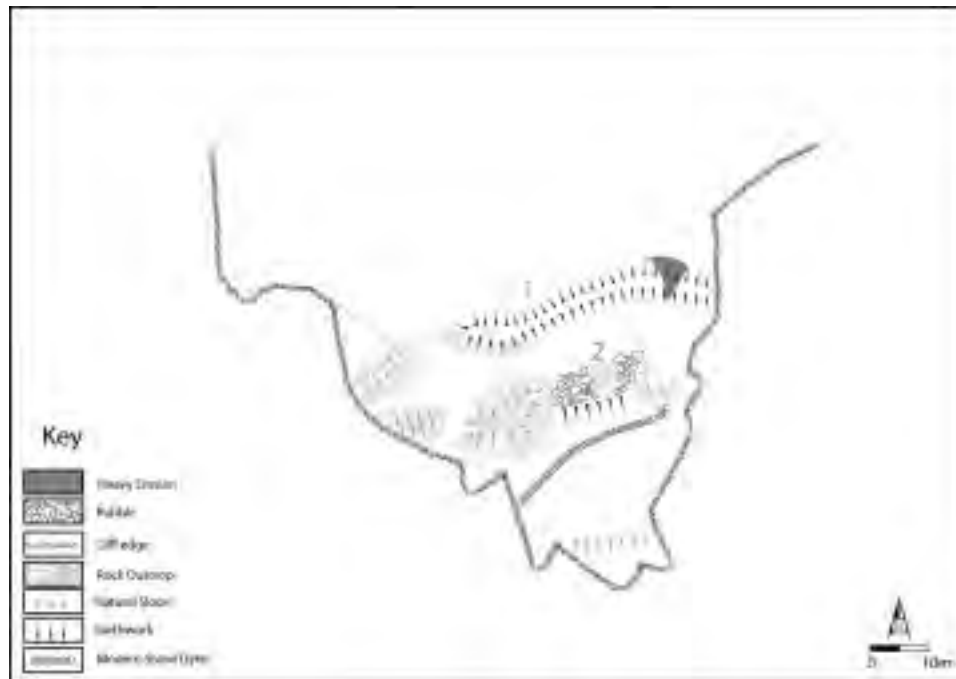


Figure 2: Garliachen, Lough Sinniness.

No current coastal erosion was evident and since no previous measured plan has been made of the site, it is not possible to measure any potential encroachment of the cliff edge into the site. The inner rampart has obviously been robbed of its stones, at some point in the past before a modern record was made. A gap in the north-eastern side of the outer rampart was recorded in 1911 as being modern erosion caused by farm access to the sea (RCAHMS 1912, 112). The continuing action of cattle scraping against the exposed scarp has exacerbated the erosion of the outer rampart at this point. Excessive vegetation over the outer rampart must imply a potentially significant impact from root action.

Barsalloch Point (NX 3474 4121)

Barsalloch Point Fort is a multivallate cliff fort, defined by two semicircular earthen ramparts and a medial ditch, enclosing an area of roughly 950 m² (Figure 3). No traces of internal structures are evident. An entrance on the north-eastern side of the site, recorded in 1911, is also not evident (RCAHMS 1912, 78).

The fort occupies an area adjoining a coastal slope composed of marine sands and gravels (Cressey & Toolis 1997, 102) at Barsalloch Point. The site lies roughly 30 m above sea level and overlooks Monreith Bay to the south-east. The immediate hinterland of the site is improved, level farmland. There is a limited view of the coastline to the north and south.

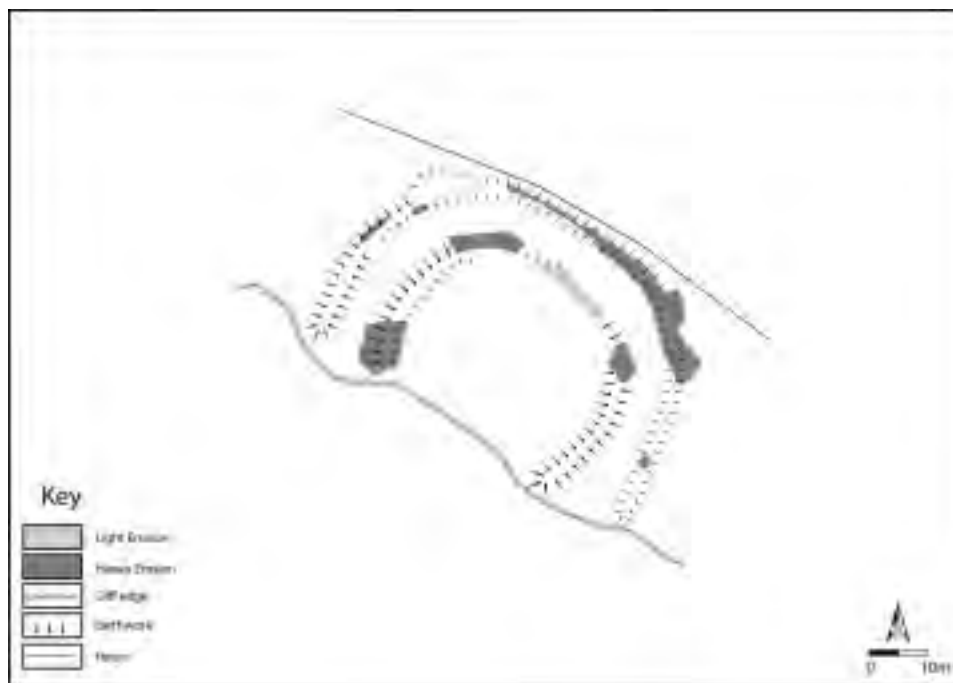


Figure 3: Barsalloch Point.

The adjacent field boundary encroaches into the north-eastern part of the ramparts, which has resulted in that part being reduced. Cultivation within the interior and the ditch was recorded in 1955 (RCAHMS 1955), which may account for the lack of any surface features within the interior. An entrance widened by ploughing was also recorded in 1955 (RCAHMS 1955) but no trace of this was evident during this survey. The similar morphology of the site to McCulloch's Castle might suggest that the original entrance lay close to the cliff edge but an insufficient gap exists between either rampart terminus and the slope edge. However, as comparison with the plan made by RCAHMS in 1955 indicates, there is no evidence for recent erosion of the cliff edge that may explain the absence of an entrance. Erosion of the site is apparent in the form of rabbit burrows and scarps caused by sheep or cattle, which affect large elements of the ramparts. Furthermore, much of the ramparts, particularly on the northern and north-eastern sides, are heavily overgrown with gorse vegetation, with root activity almost certainly reducing sub-surface archaeological remains. Although this monument is in the care of Historic Scotland and efforts have been made to improve the management of the site since this survey was made, Barsalloch Point Fort appears to have suffered significant damage in the recent past from the impact of animals, agriculture and vegetation.

Back Bay (NX 3696 3932)

Back Bay is a univallate promontory fort, comprising a curvilinear rock-cut ditch and rampart topped by the foundations and lower courses of a drystone wall, approximately 2.8 m thick, enclosing a promontory roughly 1,300 m² in size (Figure 4). An earth causeway across the ditch, near the north-eastern edge of the promontory neck leads into the site through a clearly defined entrance, 1.5 m wide, in the stone rampart. A number of rectilinear features are evident within the interior, imme-

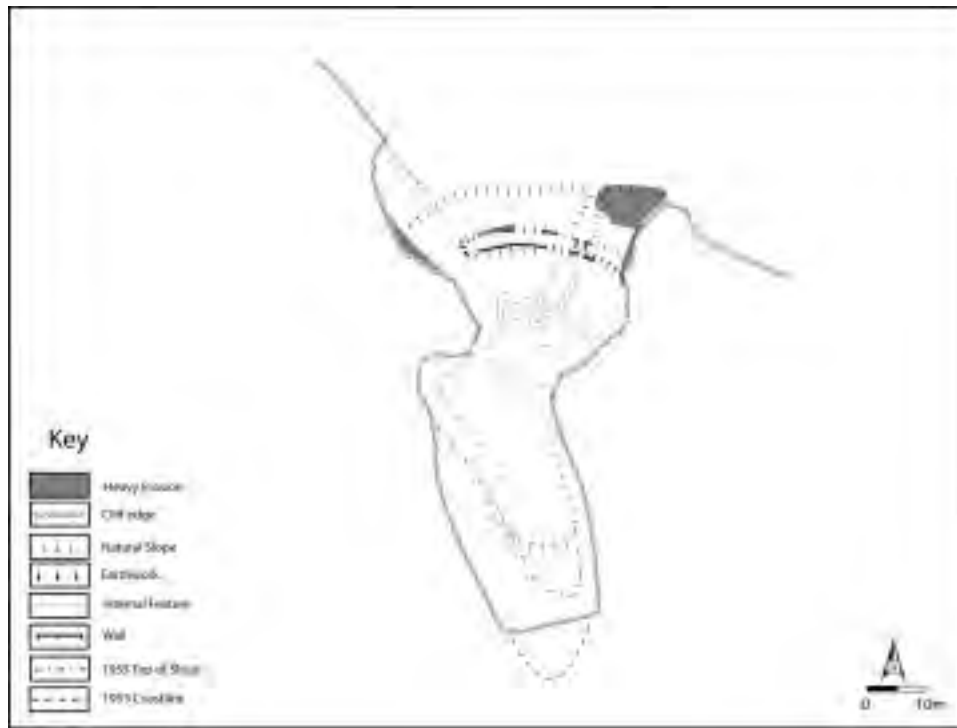


Figure 4: Back Bay.

diately behind the entrance into the site and although slight, have been interpreted together with the additional stone bank above the earth rampart as evidence for secondary medieval occupation (RCAHMS 1955).

The fort occupies a seaward sloping promontory of clay rich glacial drift deposits overlying greywacke sandstone bedrock cliffs that contain sea caves (Cressey & Toolis 1997, 110 & 463). The site overlooks Back Bay to the north-west. There is a limited view of the coastline to the south. The hinterland of the site comprises rough grazing land that slopes steeply down to the promontory, which lies at 30 m above sea level.

Localised coastal erosion at both western and eastern sides of the promontory neck is evident at Back Bay, where the clay rich earthwork underlying the stone rampart is exposed to constant weathering by the elements. However, comparison of the latest measured site survey with the previous measured plan (RCAHMS 1955) reveals that the most significant coastal erosion comprises the encroachment of slope failure of the glacial drift deposits overlying the southern cliff edge, where the tip of the promontory has evidently been lost since 1955. Animal impact at the site, including cattle and sheep tracks and rabbit burrowing is also contributing piecemeal erosion of the defining features of the fort, particularly of the eastern area of the ditch and the northern face of the central rampart area.

Carghidown (NX 4356 3507)

Carghidown is a univallate enclosure, defined by a linear earthen rampart, enclosing a small square promontory approximately 400 m² in size (Figure 5). The rampart rises to a significantly higher level above the interior ground level in comparison to the exterior ground level. A gap of 2.8 m between the rampart terminus and the cliff edge at the south-east corner of the site appears to form the original entrance into the site. Two circular depressions, one 10 m and the other 8.2 m in diameter are evident within the interior of the site, the larger one being immediately behind the rampart. A small open area lies between the two circular features, the north-eastern entrance and the south-eastern cliff edge.

The site lies at approximately 30 m above sea level on a promontory of till overlying a precipitous, fractured greywacke cliff containing sea caves (Cressey & Toolis 1997, 118). There are no bays nearby nor is any alternative access to the sea apparent. The hinterland comprises very steeply seaward-sloping rough grazing ground, which overlooks the site. Castle Feather is possibly visible along the coastline to the south.

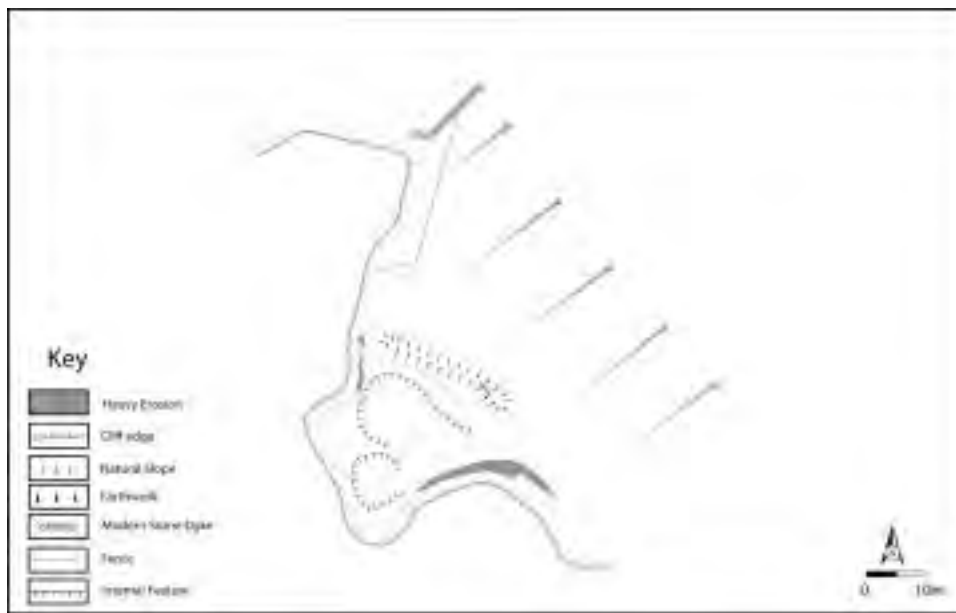


Figure 5: Carghidown.

Localised coastal erosion of both the north-western and south-eastern sides of the promontory neck is evident at Carghidown, where the soft till is being gradually removed from the cliff edge by slope failure and constant weathering by the elements. As no previous plans had been made of this site before the present survey, the long-term rate of erosion cannot yet be measured, although as the site was noted in 1795 as occupying half an acre, or 4,050 m², (Davidson 1795, 287) it would appear to have been severely reduced. Since the entrance gap to the site was measured as 8.5 m wide in 1973 (NMRS No. NX43NW 8) and is now only 2.8 m wide, considerable coastal erosion has taken

place. This is further demonstrated by the reduction of the 28.5 m (NE-SW) x 24 m (NW-SE) internal area of the site measured in 1973 (NMRS No. NX43NW 8) compared to the measurement of 20 m (NE-SW) x 20 m (NW-SE) taken in 1996. Return visits to the site in 1999 and 2000, as part of the Shorewatch Scheme, revealed that between 0.02 m and 0.27 m of coastal erosion had occurred at the south-eastern cliff edge of the site within two months (Toolis 2001, Appendix 5). The return visits also allowed the rate of erosion to be measured from the 1996 plan. This revealed that erosion of till at the south-eastern cliff edge had encroached up to 1.20 m into the site since 1996. Animal impact is also evident at Carghidown, with burrowing at the north-western rampart terminus and a small scarp close to the eastern rampart terminus eroding the fabric of the earthwork.

Castle Feather (NX 4482 3423)

Castle Feather is a multivallate promontory fort, comprising five linear earthen ramparts and ditches on the north side of a central entrance causeway and three on the south side, defining a promon-



Figure 6: Castle Feather.

tory approximately 1,400 m² in size (Figure 6). A stone wall 2 m wide and up to 3.7 m high has been constructed on the inner side of the innermost ditch, behind which are rectilinear stone walls defining what has been interpreted as a towerhouse and ancillary buildings, representing a secondary medieval occupation of an originally Iron Age site (RCAHMS 1912, 174). The entrance comprises a central mutilated causeway 2 m wide as it enters the interior of the site. A quarry pit is located close to the seaward head of the promontory.

The fort defines a promontory of till, 30 m above sea level, overlying a precipitous, fractured greywacke cliff containing sea caves and overlooking rock platforms (Cressey & Toolis 1997, 126). There are no bays nearby nor is any alternative access to the sea apparent. The hinterland comprises gently seaward-sloping ground, currently occupied by a caravan site. The Burrow Head promontory forts are clearly visible a short distance along the coastline to the east while Carghidown is possibly visible along the coastline to the north-west. The Isle of Man is visible on the horizon to the south.

Localised coastal erosion of the site is evident; particularly at the northern side of the neck of the promontory where slope failure above the cliff edge has encroached into the internal site features since the site was previously surveyed in 1953 (RCAHMS 1955). Localised erosion of the cliff edge along this part of the coast is evident from the numerous rock falls apparent at the base of the cliffs (Cressey & Toolis 1997, 128). Slight human impact, in the form of an informal pathway, is evident near the north-eastern periphery of the site.

Burrow Head I (NX 4553 3415)

Burrow Head I, the westernmost of a pair of adjacent sites at Burrow Head, is a multivallate promontory fort, consisting of three curvilinear ramparts and ditches across the promontory neck (1-3, Figure 7) dissected by a causeway from the north-east leading into the site. No features are evident within the 660 m² area of the interior.

The fort defines a promontory of till overlying a precipitous, fractured cliff containing sea caves and overlooking rock platforms (Cressey & Toolis 1997, 126). There are no bays nearby nor is any alternative access to the sea apparent from the promontory, which lies at 30 m above the sea. The immediate hinterland comprises gently seaward-sloping rough grazing ground.

Coastal erosion of Burrow Head I has not evidently made an impact, since 1955 (RCAHMS 1955) and 1912 (RCAHMS 1912, 175) when the site was previously surveyed. However, the earthworks have been severely affected by cattle erosion, an informal coastal path and partial removal of the outer rampart, recorded in 1973 (NMRS No. NX43SE 1). Due to the modern informal path, the earthworks of this site are difficult to distinguish, at the adjoining point, from the earthworks of Burrow Head II to the east. However, it appears from the 1955 plan that the ditch of Burrow Head II cut the outer rampart on the eastern flank of Burrow Head I. Due to the impact of human pedestrian traffic and farming, this is now no longer apparent.

Burrow Head II (NX 4559 3412)

Burrow Head II is a univallate fort, adjoining Burrow Head I on its eastern side, and consisting of a single linear earth rampart (1) and a wide curvilinear ditch, defining a small promontory 351 m² in size (Figure 7). A gap of 5 m between the eastern ditch terminus and the cliff edge appears to form an entranceway into the site. A small linear rise (2) is the only surface feature evident within the interior of the site.

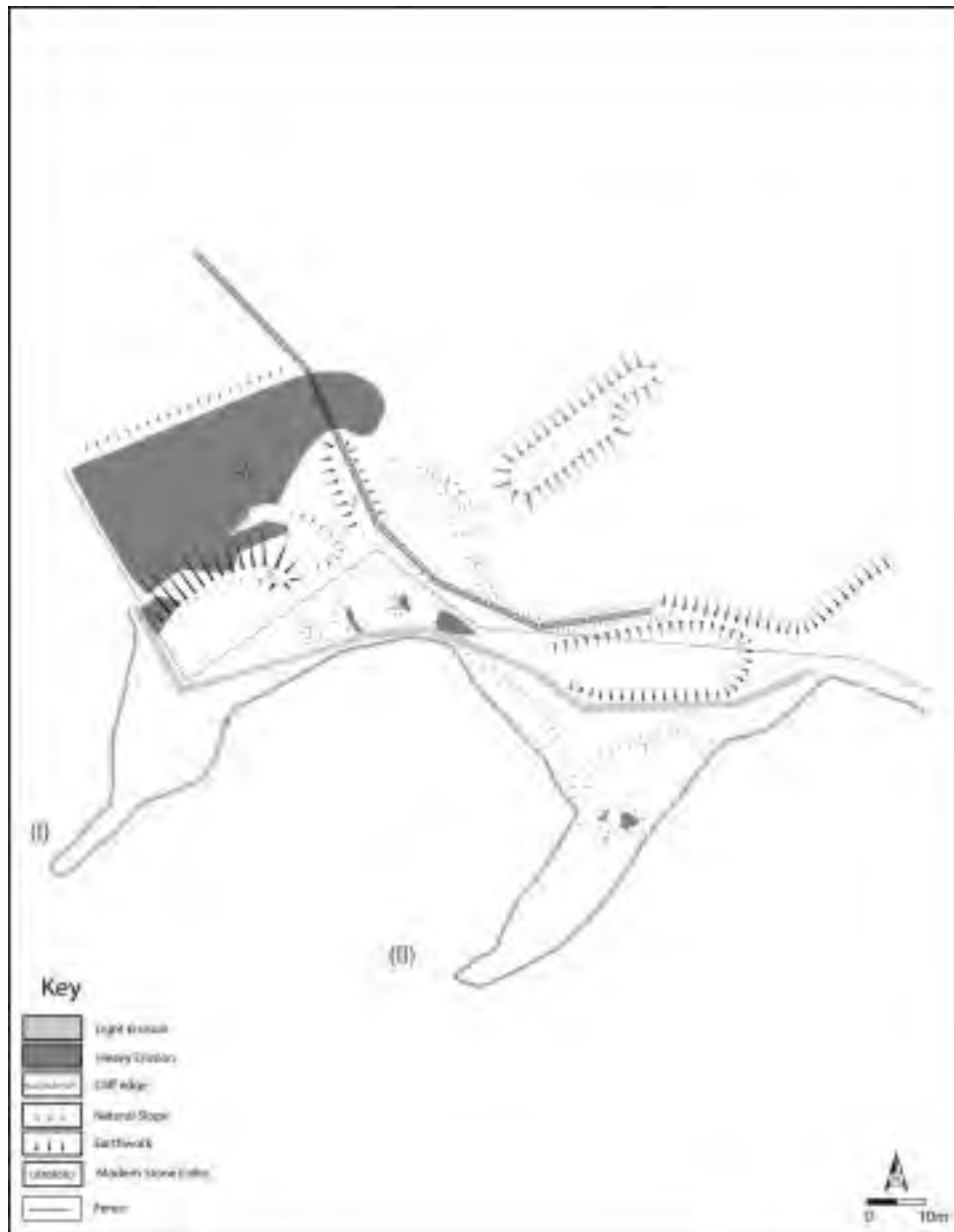


Figure 7: Burrow Head I & II.

Like the adjacent fort, Burrow Head II defines a promontory of till, 30 m above sea level, overlying a precipitous, fractured greywacke cliff containing sea caves and overlooking rock platforms (Cressey & Toolis 1997, 126). Likewise, there are no bays nearby nor is any alternative access to the sea apparent. The hinterland comprises gently seaward sloping rough grazing ground.

Coastal erosion of the site is not evident since 1955 (RCAHMS 1955). However, like its neighbour, agriculture and an informal coastal path have impacted upon the earthworks here. As discussed above, the coastal path currently obscures the adjoining point of the two forts.

Isle Head (NX 4803 3605)

Isle Head is a multivallate promontory fort, comprising three curvilinear ramparts (2-4) and one linear rampart (1), defining the landward side of a level summit 12,800 m² in area (Figure 8). The total interior area defined by the multivallate defences is approximately 28,800 m² in size. The outermost rampart (1) comprises a slight linear earthwork bank. Two medial curvilinear ramparts are separated by a ditch, within which lies a considerable amount of stone rubble, leading to the suggestion that the inner (3) of these two ramparts was originally stone faced (RCAHMS 1912, 177). The innermost rampart line (4) follows the scarp and natural rock outcrops of the interior summit. A quantity of stone rubble lying at the bottom of this scarp suggests that it too was originally stone faced (RCAHMS 1912, 177). A gap of 10 m narrowing down to 2 m between the western terminus of the ramparts and the coastal edge appears to form the original entrance. It is not clear if a gap through the western part of the ramparts, now defined by one of the modern pathways into the site, may also represent an entranceway. Both circular and rectilinear features are evident within the interior summit of the fort, as previously observed (Thomas 1961b, 79), as is a modern tower used for maritime navigation that occupies the highest point of the headland. Another linear bank, linking the central two inlets of the Isle, is located at a short distance outwith the outermost rampart but does not appear to be part of the site defences. Rig and furrow survive in the area between this earthwork and the outer rampart.

The fort occupies the raised summit of the low headland of the Isle of Whithorn, at a height of around 10 m above sea level. The Isle of Whithorn is situated at the confluence of two geological faults and comprises till overlying greywacke rock (Cressey & Toolis 1997, 133). The coastline around the Isle is composed of greywacke rock platforms that are incised into numerous gullies and ledges (Cressey & Toolis 1997, 134). The Isle protects a small sandy bay immediately to the north, between it and the mainland. The mainly pastoral hinterland of the coast slopes gently seaward towards the Isle. There is a limited view of the coastline either north-east or west. The Isle of Man is clearly visible on the horizon to the south.

As no previous measured survey plans have been made of this site, it is not possible to measure slope failure within any area of this site. However, while coastal erosion is not currently evident at the site, the ramparts have been affected in places by human action. Three informal visitor paths cut through each of the ramparts at separate points and lead to the modern tower, from which they meander across the site. Another visitor path follows the original entrance into the site along the western coastal edge of the site. The worst impact of this erosion occurs where the paths cut through the ramparts, scarps and entrance point of the site, while within the interior of the site, with the exception of the area around the modern tower the paths make only a light impact on the ground surface.

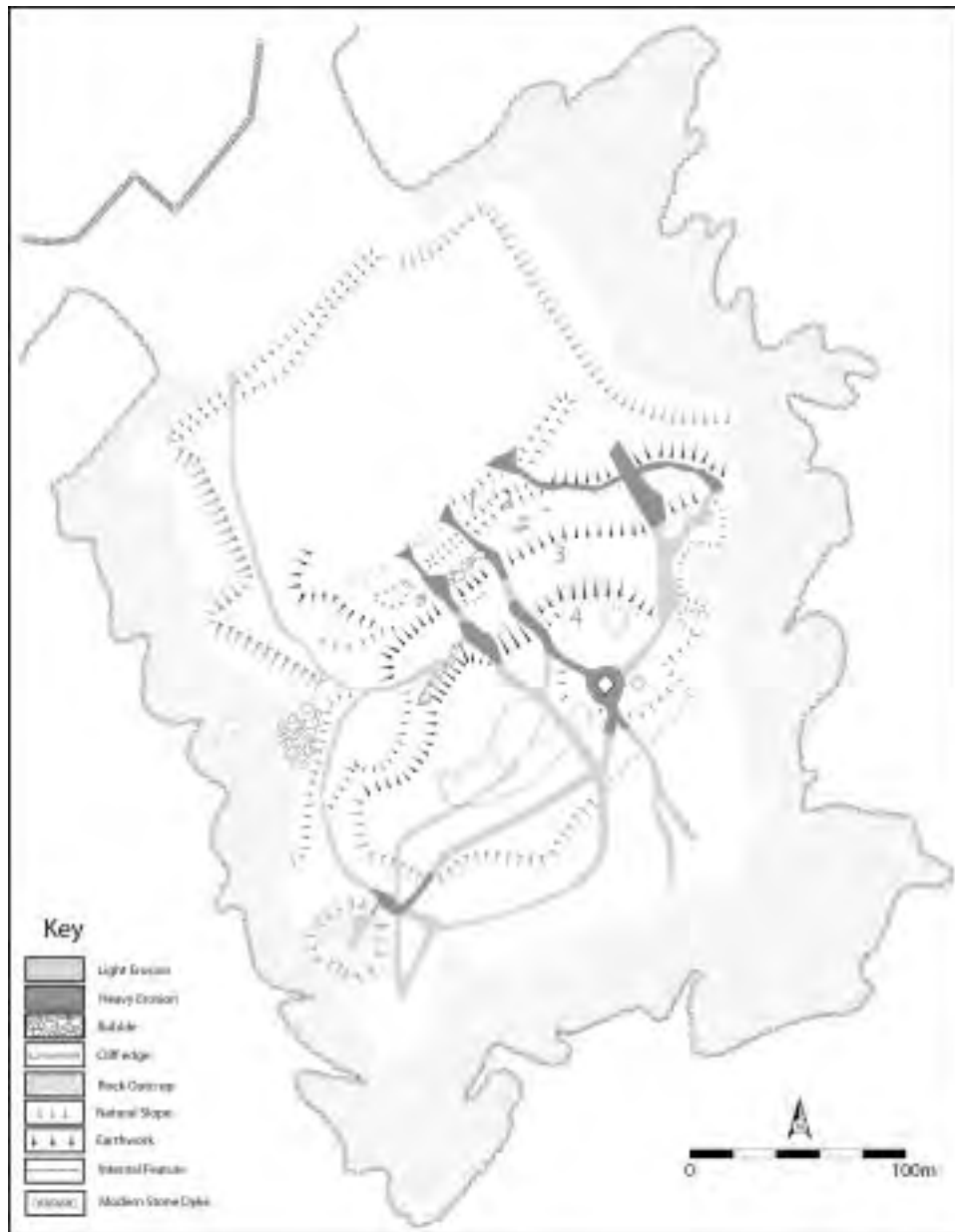


Figure 8: Isle Head

Stein Head (NX 4853 3718)

Stein Head is a multivallate promontory fort, comprising three curvilinear earth and stone ramparts (1-3) and one outer ditch (Figure 9). The earthworks define an internal area of approximately 950 m². A gap of around 2 m, close to the northern side of the site, leads into the interior of the fort, where plough rigs are evident. No other features are apparent within the interior of the site.

Stein Head occupies a promontory, approximately 20 m above sea level, comprising till overlying greywacke rock with an exposed and incised cliff edge indented by precipitous gullies (Cressey & Toolis 1997, 134). There are no bays offering access to the sea apparent on the immediate coastline. The nearby hinterland comprises moderately steep, seaward sloping pasture. Cairn Head promontory fort is visible along the coastline to the north but there is a limited aspect of the coastline to the south. Like all the promontory forts of the east coast of the Machars, a clear aspect of the Kirkcudbrightshire coast east of Wigtown Bay and Fleet Bay is apparent from Stein Head.

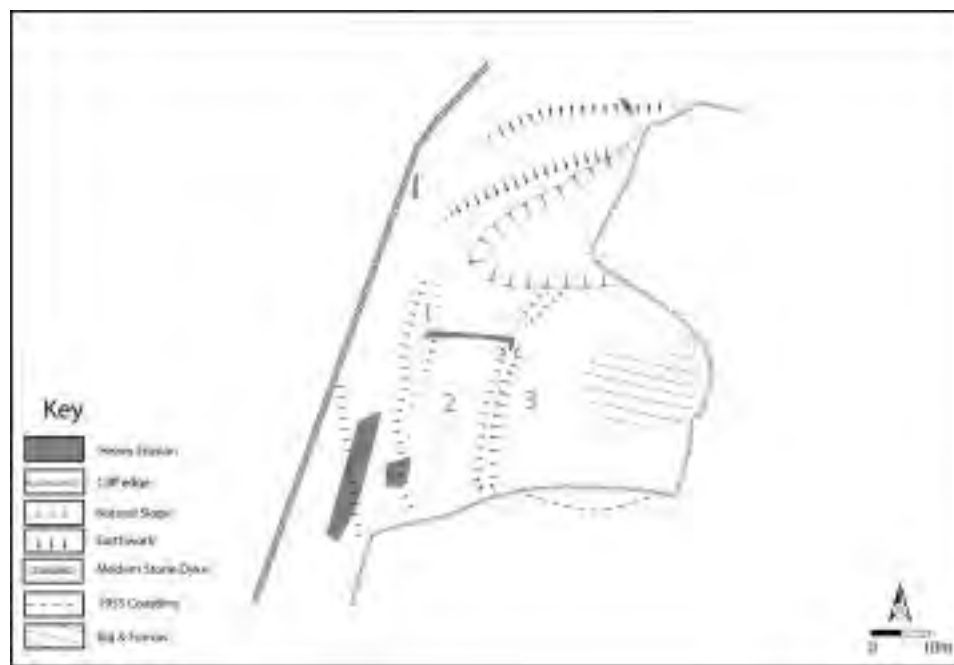


Figure 9: Stein Head.

As has been previously recognised (RCAHMS 1955) slope failure has reduced a considerable part of this site on its north-east edge but, as comparison with the 1955 plan indicates, appears to have made no more inroads into the site. Coastal erosion of the southern cliff edge, however, continues to threaten further encroachment (Figure 9). Cultivation has also made an impact at the site, removing much of the medial rampart and the central part of the ditch (RCAHMS 1955). A stone structure within the interior was recorded in 1911 (RCAHMS 1912, 177) but no trace was found in 1955 (RCAHMS 1955), due evidently to the modern cultivation features within the interior. Animal impact, in the form of exposed scarps and tracks across the ramparts, is also evident at Stein Head.

Old Fort, Dinnans (NX 4786 4026)

The Old Fort, Dinnans is a multivallate promontory fort, comprising two massive curvilinear earth ramparts (1-2) and ditches defining an internal area of approximately 1000 m² (Figure 10). An originally central causeway, 5.5 m wide, may represent the original entrance but this is obscured by its modern use for farm access. The causeway leads into the interior of the fort, which is dissected by a modern field wall and contains a WWII coastal watchtower. No other features are apparent within the interior of the site.

Old Fort, Dinnans occupies a promontory, 20 m above sea level, comprising till overlying greywacke rock with an irregular incised high cliff edge (Cressey & Toolis 1997, 142). There are no bays immediately adjacent to the site nor is any alternative access to the sea apparent. The immediate hinterland comprises gently seaward-sloping pasture ground. Cruggleton Castle is clearly visible on the coastline to the north of the site while Cairn Head promontory fort is visible to the south.

Coastal erosion has reduced a considerable part of this site, as previously noted (RCAHMS 1955) and evidently continues to encroach further into the fort as the disparity between the 1955 coastline and the 1996 coastline demonstrates (Figure 10). Two cattle feed cages located within the interior, immediately behind the inner rampart, have brought about severe deterioration of the site

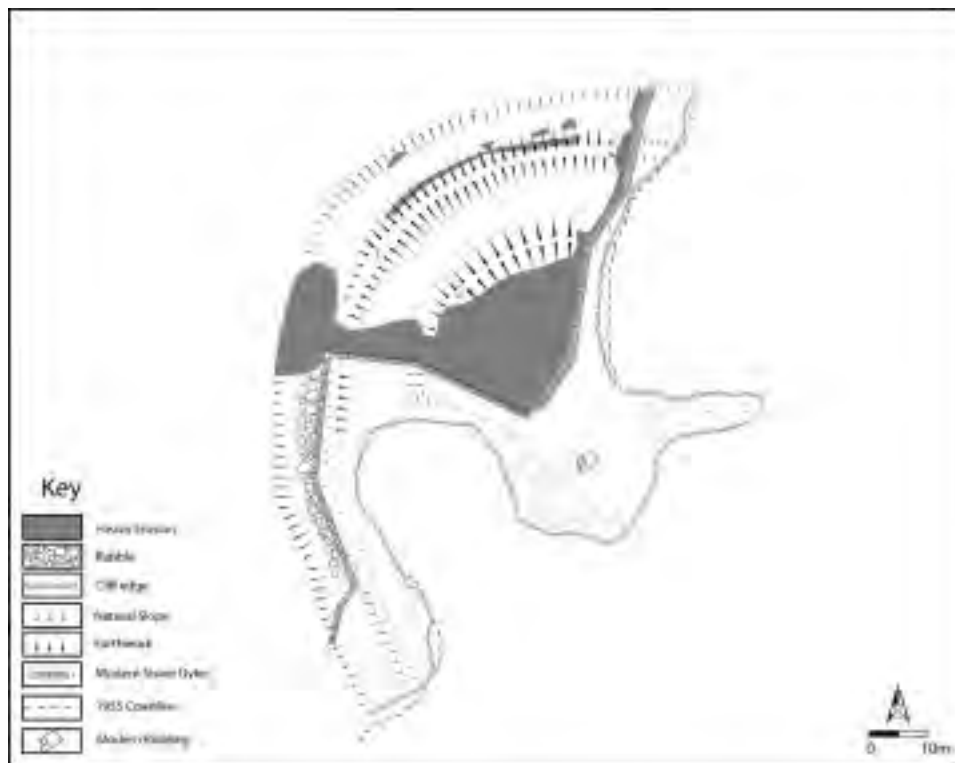


Figure 10: Old Fort, Dinnans.

by cattle, with deep and widespread erosion of much of the fabric of the ramparts and interior. Three possible timber house platforms identified in 1973 (NMRS No. NX44SE 3) and no longer apparent appear to have been obliterated by the impact of this erosion. The preservation of archaeological remains within the remaining interior of the site may have also been further compromised by the construction of the WWII coastal watchtower.

Dinnans (NX 4792 4057)

Dinnans is a univallate promontory fort, comprising one massive curvilinear earth rampart and the trace of an outer ditch defining an internal area of approximately 2,600 m² (Figure 11). A gap 4.4 m wide, between the southern terminus of the rampart and ditch and the cliff edge, appears to form the original entrance into the interior of the fort although another gap at the north end of the rampart has been previously identified as an entrance (RCAHMS 1912, 176). A modern field wall and foundations line the coastal edge of the interior. No other features are apparent within the interior of the site.

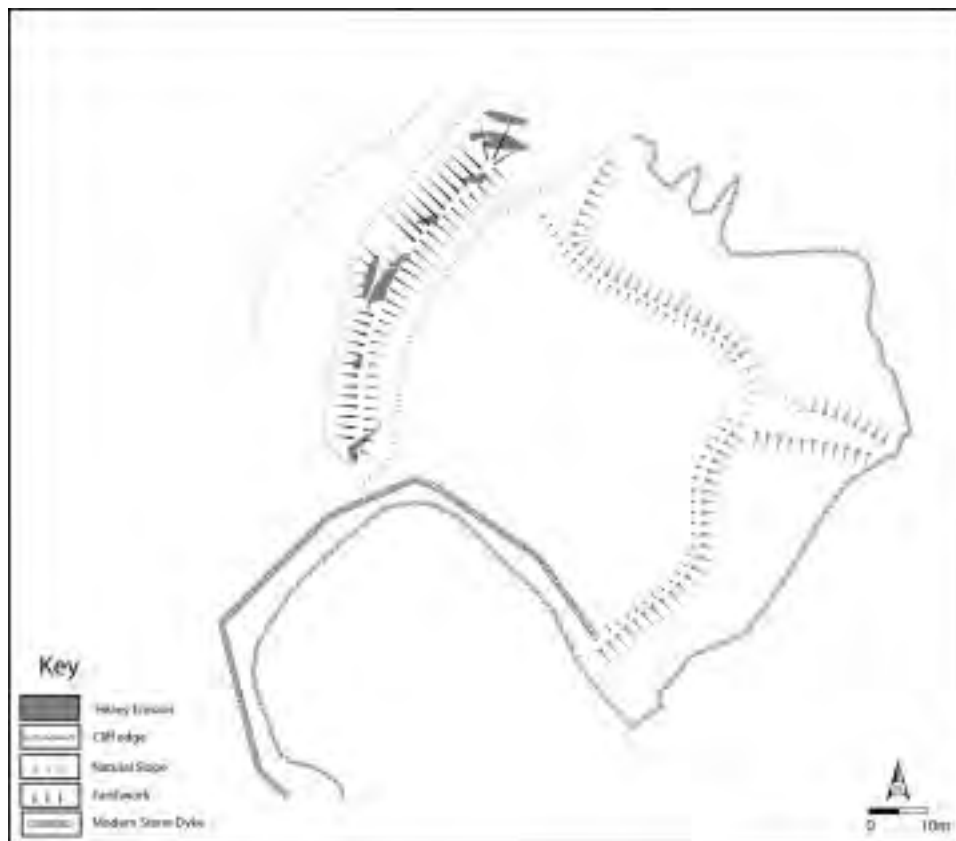


Figure 11: Dinnans.

Dinnans occupies a low promontory terrace, no more than 10 m above sea level, comprising till overlying greywacke rock with an irregular incised cliff edge (Cressey & Toolis 1997, 142). A small landing place, White Port, lies immediately south of the site. The immediate hinterland of pasture ground drops sharply down to Dinnans with the result that the adjacent ground overlooks the site. Cruggleton Castle is clearly visible on the coastline to the north of the site.

Coastal erosion is not evident at this site, nor is indicated by comparison with the plan made in 1955. However, animal impact, in the form of cattle scarps, is resulting in the erosion of the rampart. Cultivation within the interior of the site, recorded in 1955 (RCAHMS 1955), appears to have removed any possible trace of internal features from the ground surface of Dinnans. The outer ditch was also apparently much more evident on the ground in 1955 than it is now.

Muncraig Heugh (NX 6028 4615)

Muncraig Heugh formerly called Doo Cave Fort, is a small univallate cliff fort, defined by a semi-circular earth and stone rampart and an inner ditch, enclosing an area of roughly 300 m² (Figure 12). A central causeway entrance, around 2 m wide, provides access into the site. No traces of internal structures are apparent.

Muncraig Heugh is located 30 m above sea level on a precipitous incised cliff edge, comprising till overlying exposed greywacke platforms (Cressey & Toolis 1997, 238). There are no bays immediately adjacent to the site nor is any alternative access to the sea apparent. The immediate hinterland comprises gently seaward-sloping pasture ground providing a limited aspect inland. The Isle of Man and the eastern Machars coastline are however clearly visible.

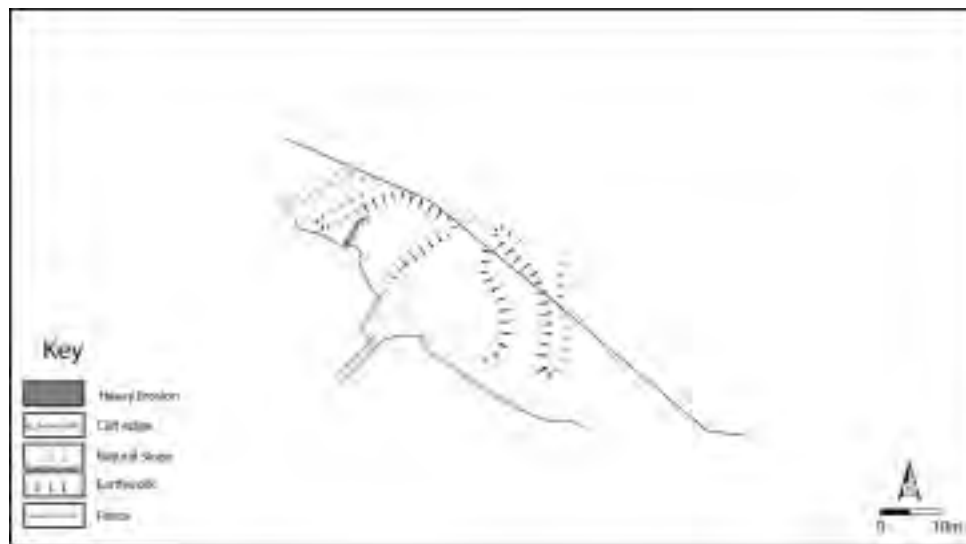


Figure 12: Muncraig Heugh.

Coastal erosion is not evident at Muncraig Heugh from a comparison between the 1890 plan and the 1996 plan, despite the recognition of slow coastal erosion of the surrounding coastline, attributed to the susceptibility of bedding planes within the greywacke cliffs to wave action and basal scouring (Cressey & Toolis 1997, 240). Cultivation, however, appears to have had an impact since the 1890 survey as the northern part of the rampart, inland of the modern fence line, has since been reduced.

Borness Batteries (NX 6198 4466)

Borness Batteries is a relatively large multivallate promontory fort, defined by three curvilinear earth and stone ramparts (1-3) and two medial ditches, enclosing an area of roughly 1,000 m² (Figure 13). Several upright stones are apparent on the medial rampart (2) although their function is not known. A roughly central causeway entrance, 3.2 m wide, provides access into the site. No traces of internal structures are apparent.

The fort is located 30 m above sea level on a precipitous promontory, comprising till overlying exposed greywacke platforms with a fractured and incised cliff edge (Cressey & Toolis 1997, 238). There are no bays apparent immediately adjacent to the site, but the location of Bone Cave (NMRS No. NX64SW 1) very close to the east of the site, may suggest a small landing bay. Borness Batteries also lies close to the western headland of Brighthouse Bay. The immediate hinterland comprises a golf course, formerly pasture. The aspect of the site comprises a clear view south to the Isle of Man and south-west to the Machars coastline between Eggerness Point and Stein Head Point but a limited aspect either east or west along the North Solway coastline.

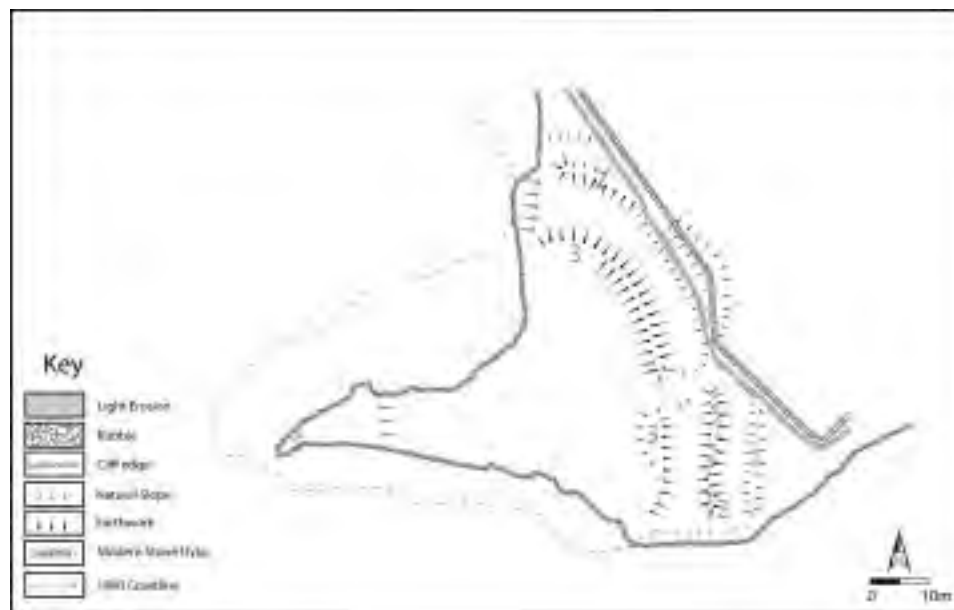


Figure 13: Borness Batteries.

Coastal erosion is evidently making an impact at Borness Batteries as the exposed western cliff edge and comparison between the coastlines surveyed in 1890 and 1996 demonstrate (Figure 13). Coastal erosion is recognised as occurring at a slow rate along this part of the coastline (Cressey & Toolis 1997, 240) but has nevertheless made a significant impact at Borness Batteries. While no internal features are apparent, a possible hut circle near the point of the cliff, noted in 1911 (RCAHMS 1914, 45), may have been lost to coastal erosion. Slight traces of rectangular structures were seen in 1951 (RCAHMS 1955) but these are no longer apparent either. Cultivation appears to have also had an impact, before the first detailed record was made of this site (Coles 1893, 130), as illustrated by the reduction of the northern part of the outer rampart and the outermost ditch, east of the modern field boundary (Figure 13). A beaten pathway has also made an impact on the fabric of the two outermost ramparts, as it cuts through the site.

Castleyards (NX 7548 4552)

Castleyards is a univallate promontory fort, comprising one curvilinear earth rampart defining an internal area of approximately 1000 m² (Figure 14). Gaps between the eastern and western terminus of the rampart and the corresponding cliff edges may form the original entrances to the site, but the central gap is probably due to modern erosion. A modern field wall lines the cliff edge of the interior. No features are apparent within the interior of the site, other than a modern pit containing dead stock, located immediately inside the rampart at its eastern edge.

Castleyards occupies a promontory terrace on a raised beach, approximately 20 m above sea level, comprising glacial sands and gravels (Cressey & Toolis 1997, 278). The site overlooks Port Mary Bay and the small landing place of White Port, both immediately south of the site. The imme-

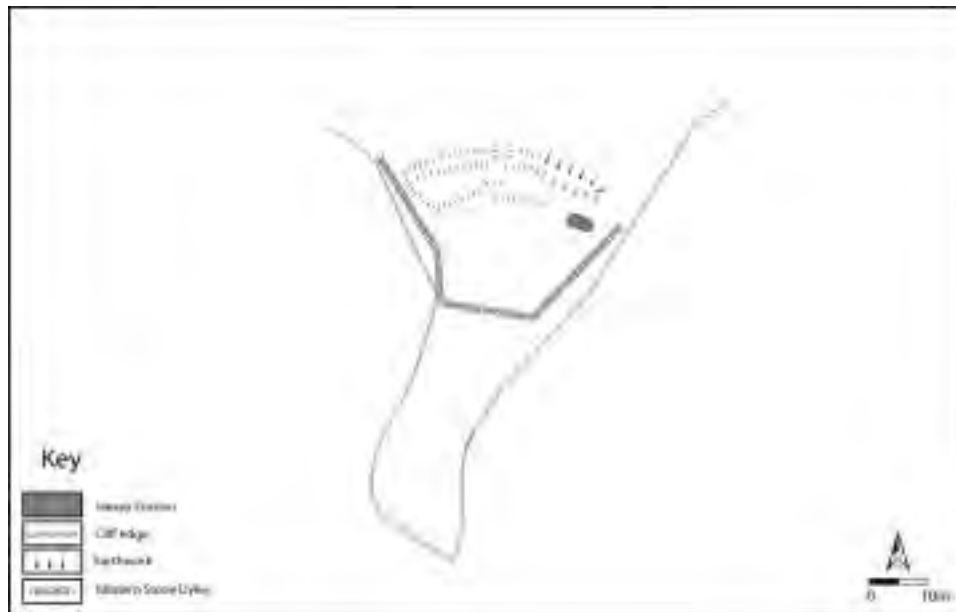


Figure 14: Castleyards.

diate hinterland composed of improved farmland slopes gently seaward down to Castleyards. There is a limited aspect both west and east along the coastline.

Coastal erosion is not evident at this site as it lies within the inland edge of a raised beach. As no previous plan has been made of this site, it is not possible to measure any potential degree of slope failure. However, farming activity, in the form of a pit for the disposal of dead stock, has evidently made some impact within a potentially significant part of the site. Root activity as a result of excessive vegetation over the ramparts may also be eroding the fabric of the rampart.

Airds (NX 8190 4834)

Airds is a small multivallate promontory fort, composed of two curvilinear earth ramparts and a medial ditch, defining an area approximately 440 m², dissected by the corner of a modern dry-stone field boundary (Figure 15). The outer rampart is more substantial than the slight, inner rampart. A gap of 2.5m, between the north-eastern terminus of the outer rampart and the cliff edge may represent the original entrance to the site. There are no features evident within the interior.

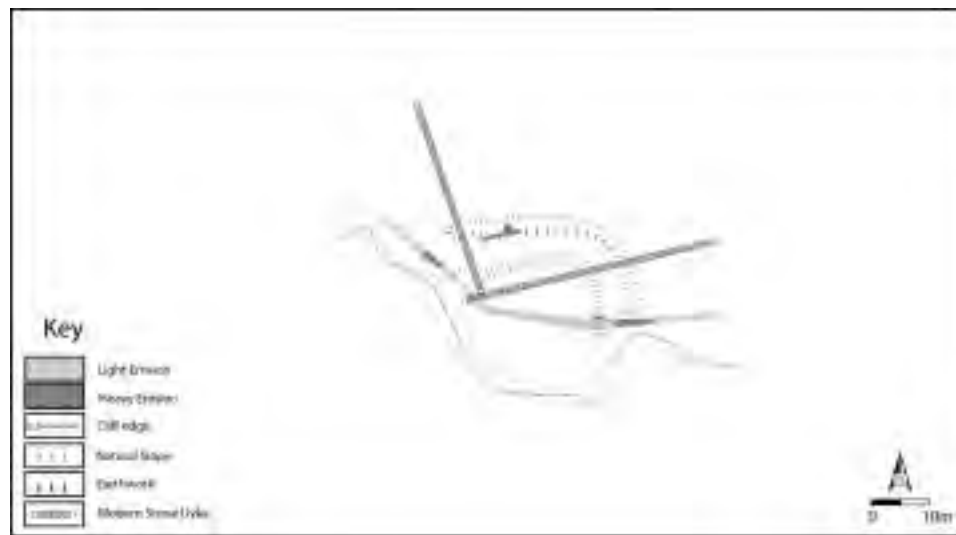


Figure 15: Airds.

The site occupies a small cliff-bound headland near Airds Point, composed of drift boulder clay overlying precipitous, deeply incised limestone cliffs 30 m above sea level (Cressey & Toolis 1997, 294). The immediate hinterland of improved farmland slopes down in a seaward direction. The site has a clear view of the Solway Coast west, as far as the promontory fort of Castle Muir but little view east. Both Cumbria and the Isle of Man are visible to the south. There are no bays immediately adjacent to Airds but Rascarrel Bay and Balcary Bay are situated a short distance to the west and north respectively.

No current coastal erosion was evident and as no previous plans have been made of Airds, it is not possible to measure any potential encroachment of the coastal cliff edge. However, it should perhaps be borne in mind for future assessments that the general coastline around Airds Point is susceptible to localised coastal erosion (Cressey & Toolis 1997, 296). Human impact, on the other hand, is clearly evident at the site where a beaten pathway cuts through the south-eastern part of the ramparts, the interior and the western terminus of the ramparts (Figure 15). An erosion scarp caused by cattle or sheep is also evident within the inner face of the outer rampart.

Castlehill Point (NX 8541 5242)

Castlehill Point is a large multivallate promontory fort, comprising a curvilinear outer earth rampart (1), a medial rock-cut ditch (2) and a thick inner dry-stone rampart (3), defining a raised level summit area of 1100 m² (Figure 16). A broken rubble-strewn slope rises from the ditch to the inner stone rampart, which is composed of large, unmortared, squared blocks laid in courses. A central causeway 2.8 m wide leads through the outer rampart and ditch, and up through a defined 2 m wide entrance in the inner stone rampart, into the interior of the site. Although slight internal features have been recorded in the past (NMRS No: NX85SE 1), no internal features could be discerned during this survey. It is possible nevertheless that the large amount of rubble lying within the inner rampart may mask internal features. A modern field fence and a derelict field wall dissect the edge of the site.

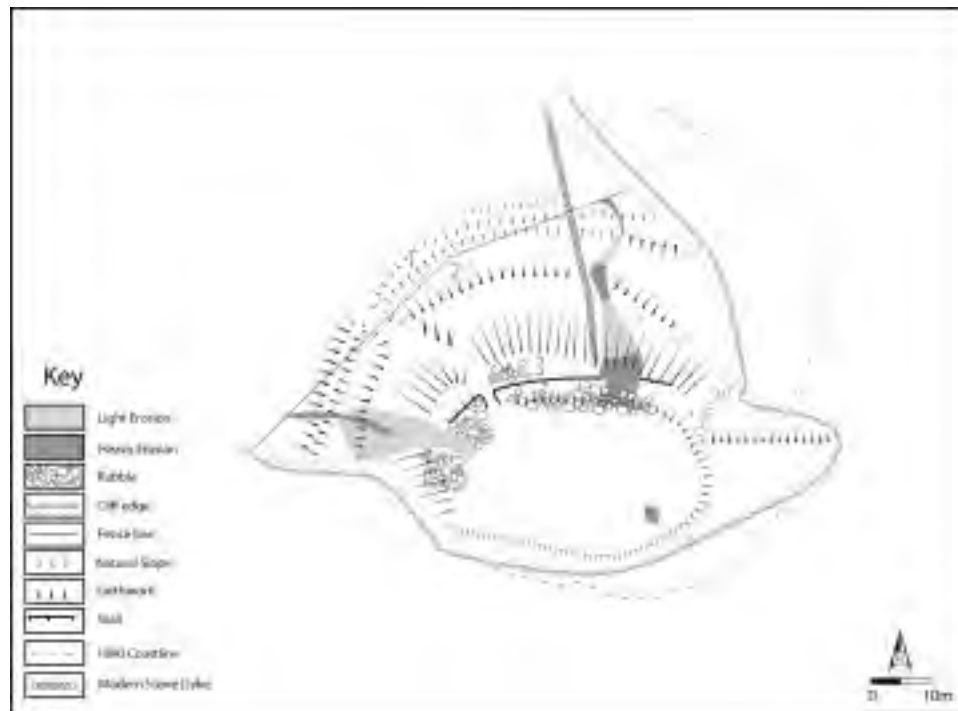


Figure 16: Castlehill Point.

Castlehill Point occupies the prominent eastern headland of Rough Firth, the mouth of the river Urr. The headland is composed of till and fluvioglacial drift overlying precipitous greywacke cliffs, 20 m above sea level. The immediate hinterland of level, improved farmland rises steeply at a short distance from the site, to the summit of Barcloy Hill to the north-east. Castlehill Point, however, has a clear view of the land around Rough Firth to the north and west to the headland of Auchencairn Bay. Cumbria is also clearly visible across the Solway Firth to the south. There is a limited view east along the coastline. Castlehill Point overlooks a small bay immediately to the north-east of the site while further access to the sea is possible from Port Donnel to the north.

Comparison with the only previous plan made of Castlehill Point, that of 1890 (Coles 1893, 93) appears to indicate slope failure and coastal erosion of some parts of the cliff edge at Castlehill Point (Figure 16). Furthermore, considerable erosion of the ramparts close to their western and eastern extremities is apparent due to the impact of an informal coastal visitor path that cuts through the site. A limited area of erosion, where the ground surface has been broken, is also evident around a viewing cairn within the interior of the site. Extensive bracken covers much of the ditch and slope of the site, with resultant root activity impacting on the sub-surface archaeological remains.

Discussion

One of the primary purposes of the surveying programme was to create an accurate measured plan of each site. The site plans presented above clearly demonstrate a considerable variety of features evident within the promontory forts of the North Solway Coast, which are summarised in Table 1.

	Multi/ Univallate ramparts	Curvi/ Linear ramparts	Earth/ Stone ramparts	Internal Features evident	Size Group (1/2/3)	Inter- visible	Access-to the Sea
Garliachen	M		St		3	•	•
Barsalloch	M	C	E		2	•	•
Back Bay	U	C	St	•	2	•	•
Carghidown	U	L	E	•	3	•	
Castle Feather	M	L	St	•	2	•	
Burrow Head I	M	C	E		3	•	
Burrow Head II	U	L	E		3	•	
Isle Head	M	C	St	•	1		•
Stein Head	M	C	E		2	•	
Old Fort Dinnans	M	C	E		2	•	
Dinnans	U	C	E		1	•	•
Muncraig Heugh	U	C	E		3	•	
Borness Batteries	M	C	St?		2	•	•
Castleyards	U	C	E		2		•
Airds	M	C	E		3	•	•
Castlehill Point	M	C	St		2	•	•

Table 1 Site characteristics of promontory forts selected for survey

Defensive attributes

The promontory forts included in the survey comprise six univallate and ten multivallate sites. The majority of both the univallate and multivallate sites have curvilinear barriers, as opposed to linear barriers. Within the group of curvilinear forts, sites such as Barsalloch Point, Muncraig Heugh and perhaps originally Old Fort Dinnans share an obvious morphology with McCulloch's Castle (Scott-Elliot 1964) in having semi-circular boundaries that enclose an area adjoining a straight cliff edge. However, aside from the extra resources required to construct a semi-circular boundary, there appears nothing significantly different in the use of a cliff edge from that of a promontory. There is also nothing very obvious, from either the surface remains or the excavation results from McCulloch's Castle, that indicates anything to distinguish these sites from inland, enclosed settlements, which are usually enclosed by curvilinear barriers. It may be also worth noting that ramparts were only apparent across the landward margins of the sites. At no sites were there signs of enclosure, other than modern field banks, on the seaward margins, perhaps a surprising aspect of what are often very exposed coastal sites but noted elsewhere (Ralston 1995, 73).

Most of the barriers defining the Solway Coast promontory forts, whether curvilinear or linear, are constructed of earth. There is nothing to indicate in these sites any other form of construction other than simple dump ramparts as revealed as the original form at McCulloch's Castle (Scott-Elliot 1964, 121). The presence of stone faced ramparts at a minority of sites may therefore perhaps represent an indicator of status, especially given the apparent absence of stone as a building material from later prehistoric settlements in Galloway (Cowley 2000, 173) save for a limited selection of settlements, forts and 'exotic' structures such as brochs and duns. The distribution of stone walled promontory forts largely adheres to the general distribution pattern of stone walled settlements within Galloway, with concentrations in central Galloway and the west coast of the Machars (Cowley 2000, 172). While the stone walled settlements have been tentatively interpreted by some as a cultural indicator, perhaps of a tribal settlement pattern (Cowley 2000, 172), it should be stressed that there exists great variety amongst stone walled settlements within the region in general and even amongst the promontory forts of the Solway Coast. Of the stone ramparts recorded amongst these sites, some, such as Back Bay, McCulloch's Castle and Castle Feather, appear to be successive to earthwork ramparts and may perhaps represent medieval occupation. On the other hand, while a castle apparently once stood on Castlehill Point (Pont 1654; Harper 1876, 194) the stone-faced rampart surviving at this site does not appear secondary to the earthworks, the medieval castle presumably occupying the central area of the site. The stone-faced ramparts at Isle Head too do not appear to be secondary to the earthworks. The stone ramparts evident at these two sites appear rather more similar to the stone-faced ramparts revealed at Trusty's Hill and Mote of Mark (Thomas 1961a, 69; Laing 1973, 37-38), although given the absence of vitrified stone from either of these promontory forts, or any other on the Solway Coast, only excavation might establish this.

A closer observation of the 'defensive' nature of the Solway coast promontory forts shows that while the promontory forts at Castlehill Point, Castle Feather and Eggerness Castle (NMRS No: NX44NE 5), for instance, were suitably defensive locations for sub-

sequent medieval castles, as has been demonstrated at other promontory sites such as Cruggleton (Ewart 1985, 55) and Castle Park, Dunbar (Perry 2000, 322), many others, such as Carghidown, Airds and Dinnans, patently do not occupy defensive locations. Other medieval coastal sites with no evidence for earlier occupation, such as Kirkclaugh motte and bailey and Raeberry Castle indicate that defensive locations on the North Solway Coast were not limited to the sites of earlier promontory forts. Given that the hinterland often slopes down to the majority of the promontory sites, if not actually overlooking them, a trait not exclusive to Galloway promontory forts (Bersu 1949, 75; Ralston 1986, 101), it is difficult to recognise a universal defensive quality to these sites. This is not something new to be observed of promontory forts (Lamb 1980, 68-69; Hingley 1992, 19) nor of many later prehistoric sites where the enclosures formed by ramparts often do not form rational defences (Rideout et al. 1992, 141; Ralston 1995, 59) but appear rather to offer an outward impression of strength without being strictly defensible (Bowden & McOmish 1987, 77). Such an explanation may be proposed perhaps for Castle Feather and Old Fort Dinnans, for example, where the multiple lines of defence stand at more or less the same level. Only at Isle Head, Castlehill Point and Borness Batteries do the ramparts protect or form a raised area that may have offered an advantage in defending the site (Plate 1). It is worth reiterating here the survival of potentially complex stone-faced ramparts at the first two of these sites, indicative of considerable investment in making truly strong defences at what may be pre-eminent settlements.



Plate 1: Castlehill Point.

In contrast Carghidown stands out in particular as a distinctly disadvantageous site for defensive purposes since it is quite starkly overlooked by the immediate hinterland (Plate 2). It might seem more plausible that the diminutive defining rampart at Carghidown was designed to keep people or stock *in* rather than out of the site. The same observation can be made of another small site, Airds, where the outer rampart is distinctly higher than the slight inner bank. The larger fort of Dinnans, on the other hand, while being defined by a massive earth rampart, nonetheless occupies a vulnerable position overlooked by its immediate hinterland. The same stark indefensible siting can be observed of the Galloway broch sites of Stairhaven, Doon Castle and Crammag Head. It should be noted that these broch sites share a remarkably similar morphology to promontory forts, being located on coastal promontory sites defined by outworks, one of several aspects of similarity between promontory forts and brochs noted elsewhere in Scotland (Lamb 1980, 6; Armit 1997, 59).



Plate 2: Carghidown

While some of the forts may be interpreted as offering merely an impression of defence, very few of the selected promontory forts sites occupy truly defensive locations. The function of the 'defences' of many of the sites may have simply adhered to domestic needs, such as the separation of domestic livestock from living areas for instance (Cunliffe 1991, 494), or perhaps the definition of 'religious sites', as has been suggested for many similarly exposed promontory forts elsewhere in Atlantic Europe (Cunliffe 2001, 346; Cunliffe 2002, 89). Alternatively the ramparts may have simply been symbolic of the status of the inhabitants as postulated for other sites in Dumfries and Galloway (Banks 2000,

276-277). Certainly the surviving remains and topographical location of the majority of sites indicate a largely non-military purpose for many of the promontory forts on the North Solway Coast, an observation that has been made of similar sites across Western Europe (Ralston 1995, 61). Despite the use of terms such as 'forts' one cannot assume a defensive strategy to the purpose or siting of the majority of promontory forts on the North Solway Coast.

Occupation

The nature of the occupation of the Galloway promontory forts, however, is difficult to define from surface remains, as internal structures are rarely apparent within the selected sites and where they are apparent are more often found within stone walled sites and indicative perhaps of secondary occupation. While the absence of surface indications within the majority of the surveyed sites does not preclude the sub-surface survival of timber ring-groove round house remains, as recorded at Cruggleton (Ewart 1985, 12) and other sites in Dumfries and Galloway such as Rispain Camp, Carronbridge, Woodend and Hayknowes (Haggarty & Haggarty 1983; Johnston 1994; Banks 2000; Gregory 2001), it may suggest perhaps that promontory forts were not occupied in the same intensive way as other later prehistoric settlements, such as Gibb's Hill (RCAHMS 1997, 122) and Boonies (Jobey 1975, 138). However, as will be discussed below, modern cultivation has distorted the record at many of the Galloway sites. The survival of visible interior features within Back Bay, Carghidown and Isle Head, possibly pertaining to the original occupation in the case of at least the latter two sites, is therefore all the more remarkable. The two circular features facing an open 'courtyard' at Carghidown draws parallels with Boonies in East Dumfriesshire, where the internal layout was divided between a living area of successive roundhouses and an open yard (Jobey 1975, 138). The internal features apparent at Isle Head are concentrated in the central raised area of the site, which could mean theoretically that the remaining lower areas of the site were left available for stock but the substantial disparity in size between Isle Head and Carghidown inhibits the drawing of parallels between the two sites. The terraced form of Isle Head conforms rather to the typical layout of a nuclear fort (Driscoll & Yeoman 1997, 228). However, that the internal features at Back Bay also congregate within a specific limited area, leaving the remaining interior ground available for stock, does suggest the possibility of a common internal layout pattern amongst the Galloway promontory forts.

The size of the internal areas within the promontory forts, available for occupation, varies from the exceptional large site of Isle Head (12,800 m²) to the very small one at Muncraig Heugh (320 m²). While it has been demonstrated and will be discussed below that at some of the promontory forts coastal erosion has clearly reduced the internal area of the site, as a general rule the promontory forts of the North Solway Coast appear to fall into three groups according to size;

- (1) an extremely limited number of large sites over 2,000 m² in internal area
- (2) the most numerous group of sites between 800 m² and 1500 m² in internal area and
- (3) a smaller group of sites between 320 m² and 500 m² in internal area

However, no correlation can be drawn between the size of sites and any obvious characteristic in their morphology, such as rampart attributes, topographical locations or internal features. While Group (3) may fit into the RCAHMS 'homestead' category of site, the not insubstantial defences apparent at Garliachen and Burrow Head I are difficult to accept as indicative simply of a 'homestead', whatever that may mean. Of the two largest sites, Isle Head and Dinnans, there is great disparity evident in terms of rampart morphology and topographic attributes. Having stated this, the range of internal areas apparent throughout the three groups highlighted above accords with the pattern evident across the latter prehistoric settlement record of Galloway where the vast majority of sites fall within 0.7 ha. Only a small minority of Galloway sites enclose distinctly larger areas and these sites generally exhibit more complex defences and predominantly occupy higher altitude locations. However, while the promontory forts of the Solway Coast generally follow this pattern, the reduction of many of the sites by coastal erosion rather inhibits classification of the promontory forts into groups simply according to size.

Inter-visibility attributes

Inter-visibility between different promontory forts and other potentially contemporary inland sites was also observed. While the results would appear to indicate that inter-visibility, being a common attribute to promontory forts on the Solway Coast, might be a significant attribute, very few sites were inter-visible with those along the same coastline. For it should be noted that all those selected sites on the west and east coastlines of the Machars peninsula are inter-visible with sites, whether selected or not, on the east coast of the Rhins and western part of the Kirkcudbrightshire coast respectively. Given the distance involved, this apparent inter-visibility may be no more than an accident of geography. Certainly, given the haphazard occurrence of inter-visibility between the sites along the same coastline and the lack of an inland aspect from all but two sites, Castlehill Point and Airds, as well as the lack of evidence for contemporary occupation at a sufficient number of these sites, inter-visibility should not, at least yet, be accepted as a significant attribute of the promontory forts on the Solway Coast.

Maritime access

Perhaps surprisingly, given their proximity to the sea, only half of the surveyed sites are adjacent to bays or obvious landing places, where access to the sea is available. This apparent disinterest in maritime activity is in contrast to what has been noted at many promontory forts in other regions of Scotland, such as Moray for instance, leading to the observation by some (Ralston 2002) that the Galloway promontory forts 'have their backs to the sea'. It should, however, be countered that a similar lack of maritime access has been observed of promontory forts elsewhere in Scotland, Wales, Ireland and the Isle of Man (Lamb 1980, 69; Hogg 1972, 16; O'Kelly 1953, 35; Barry 1981, 323; Bersu 1949, 79). Within the selected group of Galloway sites, the only correlations that can be drawn between site characteristics such as size or morphology and access to the sea are that access to the sea is much less common amongst group (3) outlined above, comprising the smallest sites, than it is amongst the other two groups of larger sites. Furthermore at none of the sites with linear defences was access to the sea apparently a favoured attribute.

However, while promontory forts in Galloway cannot be collectively associated with maritime activity, it may be possible to identify likely maritime activity associated with particular individual sites. Observations have previously been made regarding the possible association of the Isle of Whithorn with the long distance trade of the 5th to 7th centuries AD evident at Whithorn (Alcock & Alcock 1990, 119; Hill 1997, 5-6; Thomas 1997, 98). The presence of a large, well-defended promontory fort at Isle Head, guarding the small bay at the Isle of Whithorn (Plate 3), the traditional port of Whithorn, could be interpreted as a secular counterpart to the ecclesiastical high status settlement at Whithorn itself. Furthermore the promontory fort of Castlehill Point, with comparable defensive and maritime attributes to Isle Head, lies in close proximity to the Mote of Mark, another node along with Whithorn in the long distance trade network of the mid 1st millennium AD. This trade network, of course, connected many such sites, such as Dunadd, Dinas Powys, Dumbarton and Tintagel, with Continental Europe and the Mediterranean (Laing 1973, 38; Laing 1975, 98; Fulford 1989, 4; Alcock & Alcock 1990, 113-119; Thomas 1993, 93; Campbell 1996, 87).



Plate 3: Isle Head, marked by the white tower on the headland.

Given the lack of any stratified dating evidence from Isle Head and Castlehill Point (Radford 1957, 169; Truckell 1967, 172), one can only speculate on the potential or not of contemporary connections between these two promontory forts and Whithorn and Mote of Mark, two of the richest site artefactual assemblages from the post-Roman trade network of the western British seaboard (Alcock & Alcock 1990, 126; Campbell 1996, 87). While neither of the promontory forts can be dated, it should be borne in mind that the occupation, or re-occupation of originally Iron Age coastal promontories, during the early

historic period appears to be a common pattern (Edwards & Ralston 1980, 208; Ralston 1980, 33, 37 & 39) within a greater settlement shift to coastal locations between the 1st century BC and the 6th or 7th centuries AD (Alcock & Alcock 1990, 120). Furthermore, within models where imports were first obtained at 'primary' sites and then subsequently distributed to 'secondary' sites during the 5th, 6th and 7th centuries AD, Whithorn is suggested as a 'secondary' recipient site of wine and oil while the Mote of Mark is suggested as a primary site, though perhaps largely of an industrial nature (Snyder 1998, 244). It is feasible using these models that the Isle of Whithorn and Castlehill Point fulfilled the role of primary sites too, being perhaps settlements of local secular power from where imports were obtained and distributed during the Early Historic period.

It is not just during the Early Historic period, however, that potential associations between promontory forts and maritime activity have been postulated (Armit 1997, 59). The presence of Roman pottery at McCulloch's Castle (Scott-Elliot 1964, 123) and a 1st century AD denarius of Vespasian at Borness Batteries (Wilson 2001, 113), for instance, are not perhaps especially significant, aside from indicating likely dates for occupation of these sites. However, the distribution of Roman finds, particularly from native contexts, adheres to a predominantly coastal, *clustered* dispersal pattern in Galloway (Robertson 1970, 203-211; Wilson 2001, Fig. 7). One of the clusters of Roman finds from native contexts is found west of Kirkcudbright Bay (Wilson 2001, Fig. 7) concentrated around Borness Cave (Clarke 1876; Clarke 1878), close to the foot of Borness Batteries promontory fort. Having yielded a stray 1st century Roman coin (Wilson 2001, 113), it is not inconceivable that Borness Batteries was occupied at the same time as Borness Cave. Brighthouse Bay, again within this cluster of Roman finds, yielded a counterfeit coin mould of the 3rd century AD during a watching brief in 1992/93 (Maynard 1994, 20; Boon 1994, 21). The assumption that the counterfeit coin mould can only be understood in terms of Britain south of the Solway, not the North Solway Coast (Boon 1994, 21), not only ignores the local native context for Roman finds but also the evidence from sites elsewhere in the British Isles, such as the promontory fort of Coygan Camp in Carmarthenshire, which provided a native context for counterfeit coin production during the 3rd century AD (Wainwright 1967, 60). Given this potential parallel and the cluster of Roman finds on this part of the Kirkcudbrightshire coast, it is quite feasible that the counterfeiting activity at Brighthouse Bay could have been instigated by native communities keen to acquire Roman goods from the south, as others have tentatively suggested (Holmes & Hunter 2001, 173-4).

While the cluster of Roman finds from Luce Bay (Breeze & Ritchie 1980, 84; Saville & Shiels 1998, 130; Saville & Shiels 1999, 116; Saville & Shiels 2000, 129; Wilson 2001, 112 & 116-118) does not appear associated with any known native site, the correlation between the concentration of clusters of Roman finds from native contexts, around Rough Firth and the southern Machars (Hunter, 1994, 55; Wilson 2001, Fig. 7), with the locations of large, well defended promontory forts, such as Castlehill Point and Isle Head, should not be ignored when examining trade and exchange patterns throughout the first millennium AD. The evidence from Dumfries and Galloway for the adoption of ideas from outside the region during the Iron Age, in the form of 'exotic' structures such as brochs and

square barrows (Cowley 2000, 174; Cowley 1996, 112; Halliday 2002, 104) and a range of high status artefacts (MacGregor 1976, 8; Warner 1983, 166; Mackie 1995, 660; Hunter 1997, 121; Harding 2002, 204), indicates that native communities participated in extensive networks of communication and exchange on their own terms and independent of the Romans. The economic basis of this exchange was probably the agricultural wealth of local communities as suggested by recent excavations of later prehistoric settlements in south-west Scotland (Haggarty & Haggarty 1983, 43; Johnston 1994, 281; Banks 2000, 271; Gregory 2001, 44). Given the limited impact of the brief Roman presence in Scotland (Hanson 1997, 216; Ralston & Armit 1997, 218), it is not unreasonable to postulate that trade and exchange continued unabated through and beyond the first half of the first millennium AD, without requiring the effect of 'Romanization'. Since the presence of native 'ports' is evident elsewhere in the British Isles (Cunliffe 1978; Raftery 1994, 208; Raftery 1995, 651; Cunliffe 2002, 78-79) it is conceivable that some of the promontory forts on the North Solway Coast may preserve the stratified contexts for local participation in these networks of communication and exchange.



Figure 17: Sites referred to in text.

Settlement patterns

While the promontory forts of Galloway's coastline have been noted in the past as a peculiar regional settlement form (Feachem 1966, 76), it is difficult to accept, given the results of the survey, that they represent anything more than a reflection of the topography of the region. The site plans produced in this survey demonstrate considerable variety in interior size, scale and morphology of defining boundaries and topographical attributes. Since a similar trait of diversity is apparent amongst the general distribution of later prehistoric enclosed and fortified settlement forms in Galloway (Cowley 2000, 173) and that where internal settlements layouts are visible on the ground, the internal organisation of features adheres to patterns identified within inland settlements, promontory forts do not appear to represent a distinct, homogenous settlement form within the regional settlement pattern at all. Observations of the morphological traits of the promontory forts of the Rhins of Galloway in RCAHMS surveys (1985, 14-19) and by the author would concur with this sense of diversity. While easy to group together in terms of topography, 'promontory forts' covers a variety of dissimilar sites, much in the same way that 'hillforts' hides a disparate assemblage of sites.

If the promontory forts of the Galloway coast are simply manifestations of inland settlement forms distributed across the region, it should be possible to recognise the same types of enclosed and fortified settlements amongst the promontory forts. As has been noted above, the concentration of stone walled promontory forts on the west coast of the Machars and the central Galloway coastline adheres to corresponding inland concentrations of stone walled settlements within Galloway (Cowley 2000, 172). Furthermore, Isle Head and Castlehill Point, which stand out amongst the Galloway promontory forts in exhibiting evidence of complex defences at places of strength with ready access to the sea, may belong to a class of pre-eminent site, evident in the region, exemplified by Mote of Mark, Castle O'er, Tynron Doon and Trusty's Hill. Excavations attribute these latter sites to the early and middle centuries of the 1st millennium AD (Longley 1982, 132-134; Cowley 2000, 173; Williams 1971, 110; Thomas 1961, 67-69). While not necessarily synchronous, these sites perhaps together with the nucleated 'courtyard forts' (Truckell 1963, 94-5; Feachem 1966, 76; Laing 1977, 36), may represent roughly the same high echelon of status within the later prehistoric/early historic settlement pattern in Dumfries and Galloway. Other prominent settlement forms on the Galloway coastline, specifically the brochs at Stairhaven, Crammag Head and Ardwell Point occupy identical topographical sites to many of the more diminutive promontory forts. Perhaps the more prominent dry-stone structures within the interior of these enclosed sites have obscured the similarities the sites as a whole share with other enclosed settlements.

However, while other settlement forms, such as rectilinear enclosed settlements (Haggarty & Haggarty 1983, 43; Johnston 1994, 284-5) and crannogs (Barber & Crone 1993, 531; Hunter 1994, 65) appear to occupy distinct though perhaps less prominent positions within the settlement hierarchy of the 1st millennium AD, little has been established for the majority of enclosed settlements within Galloway (Cowley 2000, 172), whether on the coast or inland. Even with the distinct concentration of promontory forts, crannogs and brochs, together with the perceived dominance of small, circular enclosed

sites (Truckell 1984, 200), that distinguishes the later prehistoric settlement pattern of Galloway from the lands east of the Nith and particularly south-east Scotland (Banks 2000, 273-278), there is a dearth of evidence (Armit & Ralston 1997, 187-88), particularly from stratified contexts, to prove any kind of underlying cultural identity. As others have recognised (Oram 2000, 242; Banks 2002) much more work is required before a meaningful settlement pattern can emerge. It will be only through carefully selected excavations, carried out in conjunction with the study of the local context that the nature of occupations and perhaps more importantly the relationships between contemporary sites within the same region might be better understood, as has been achieved elsewhere, as for example, at Buiston in Ayrshire (Crone 2000, 159).

Condition of sites

In addition to creating an accurate measured plan of each site, the survey also measured the extent of erosion at each site and determined the cause of the erosion in each case. This was carried out in order to appraise the condition of the selected sites, a necessary prerequisite if detailed investigation, based on the relative values and costs of such work (Ashmore 1994, 39), is to be planned in the future. The results of the survey demonstrate that all of the selected sites are currently affected, to a greater or lesser extent, by erosion of some form. The types of erosion apparent include coastal erosion and slope failure, animal impact, agricultural impacts, root activity and footpath erosion.

Comparison between previous site plans and the site plans produced in this most recent survey demonstrates that coastal erosion is evident at seven of the twenty-five sites on the North Solway Coast. That coastal erosion is evident at a number of sites should come as no surprise, given that one would expect the same process that formed 'defensible' promontories to continue eroding the margins of these same promontories through wave attack and slope failure (Gilbertson et al. 1996, 105). Localised and fairly limited coastal erosion of the cliff edges at Back Bay, Carghidown, Castle Feather, Stein Head and Old Fort Dinnans is apparent. More significant coastal erosion, however, has apparently made inroads into the cliff edges of Castlehill Point and Borness Batteries, as demonstrated by comparison with survey plans of the sites made in 1890, although caution should be applied as to the accuracy of the older plans. Comparable massive coastal erosion of Stein Head and Old Fort Dinnans has also clearly taken place at some point in the past, but not since 1955 when the first measured plans of these sites were made.

Slope failure is also apparent at Back Bay, Carghidown and Castle Feather where the overlying till is being eroded at a faster rate than the underlying geology. This is an important aspect of the coastal erosion of these promontory forts, for while the underlying geology may be more impervious to weathering and wave attack, it is within the overlying and more vulnerable till that the archaeological remains survive. It is apparent at sites such as Carghidown that relatively insignificant erosion of the underlying cliff has resulted in slope failure, which has led to the ground surface being broken and the underlying till being exposed to weathering (Plate 4). The repeat inspections of Carghidown demonstrate that this is a constant and steady process. The significant slope failure evident at Back



Plate 4: Coastal erosion at Carghidown.

Bay, Carghidown and Castle Feather is thus probably of more immediate threat than the periodic erosion of the underlying geology at these and the other sites. The slope failure apparent at these three sites is of particular consequence as it is the rare preservation of internal features within them that is under threat.

The surveying programme has also illustrated that the impact of burrowing animals, probably rabbits, is eroding areas within three of the selected promontory forts. Burrowing is evident at Barsalloch Point, Back Bay and Carghidown, although following guidelines set out for recording infestations (Dunwell & Trout 1999, 13), at none of these sites was there intense activity evident. There was no sign of the animals responsible for damage and many of the holes may be empty. There were less than ten holes at each site and these occurred very close together affecting less than 25% of the earthworks at any one site. Nevertheless burrowing, in affecting the defining earthworks, may have made a significant impact on the archaeological remains at each site. The occurrence of burrowing at these three sites may be attributable to the relatively marginal status of these sites within the modern landscape.

At ten of the selected promontory forts, the surveying programme recorded scarps caused by breakage of the ground surface and the continued wearing of the exposed soil by stock, particularly cattle. This type of erosion is evident at Garliachen, Barsalloch Point, Back Bay, Carghidown, Burrow Head I and II, Stein Head, Dinnans and Airds to a greater or lesser degree. However, it is at Old Fort, Dinnans where the most extensive



Plate 5: Cattle feed cages within the interior of Old Fort Dinnans.

damage from the impact of cattle is apparent. At Old Fort Dinnans, as at all these sites, it is the earthworks, which are most susceptible to erosion from stock grazing. The ground surface of a large part of the earthworks at Old Fort Dinnans has been broken and is resulting in the gradual compression of the ramparts. The substantial erosion apparent at Old Fort Dinnans is due to the congregation of stock at two cattle feed cages occupying the area immediately behind the internal rampart (Plate 5), with subsequent repercussions for the preservation of the underlying archaeology. The detrimental impact on the survival of archaeology at Old Fort Dinnans is further demonstrable by the absence of internal features noted in previous inspections (NMRS No. NX44SE 3).

Other agricultural activities either have in the past or are currently making an adverse impact at seven of the selected sites. McKerlie noted the damage by ploughing to many of the promontory forts around the southern tip of the Machars (1906, 418) and inspections by the Royal Commission for Ancient and Historical Monuments (RCAHMS 1955) noted cultivation within the interiors of Barsalloch Point, Stein Head and Dinnans, though now longer practised. Partial removal of ramparts, predominantly as a result of ploughing, has taken place at Barsalloch Point, Stein Head, Muncraig Heugh and Borness Batteries in former times but more recently a substantial part of the outer ramparts of Burrow Head I has been removed (NMRS No. NX43SE 1). The excavation of an animal disposal pit at Castleyards also belongs to more recent times.

Erosion of the sub-surface archaeological remains from root activity, as a result of excessive vegetation, appears to be present at four of the selected sites, to a greater or lesser degree. While bracken obscures much of the ditch at Castlehill Point, gorse obscures a large part of the earthworks at Garliachen, Barsalloch and Castleyards. It should also be noted that at five of the promontory forts not selected for survey, excessive vegetation, in the form of gorse or trees, deemed them inaccessible. The presence of unmanaged, excessive vegetation is largely the result of the marginal status of these sites within the modern landscape.

The impact of human pedestrian traffic is evident at seven of the selected promontory forts. At most of the sites this amounts to little more than the breaking of the ground surface by informal beaten paths and the subsequent compression of limited areas within the sites. However, at Isle Head and Castlehill Point (Plate 6) the number of people following informal beaten paths has caused significant damage to archaeological remains within specific areas of each site. The detrimental impact of visitors at these two latter sites is due to their inclusion within popular recreational coastal paths, where the management of visitors around the sites has not been considered.

The survey plans (Figures 2-16) produced in this programme of work provide a baseline of data from which future assessments may measure the condition of each selected site and aid the implementation of appropriate management plans. A long term monitor-



Plate 6: Visitor erosion through the rampart of Castlehill Point.

ing programme, possibly incorporated into the national Shorewatch scheme, is clearly required to address coastal erosion (Gilmour 2001, 3). This could also augment the present system of inspection and liaison with landowners by Historic Scotland. Given the Scheduled Ancient Monument status of the majority of the selected sites, their current land management clearly merits review and modification, under the guidance of Historic Scotland (Barclay 1994; Macinnes & Ader 1995). Furthermore, liaison between national and local bodies and interested groups must develop if an effective, coordinated strategy is to be implemented that will enhance the general protection and management of the promontory forts of the North Solway Coast. While attempts have been made by the author, for instance, to minimise the impact of pedestrian traffic at Borness Batteries, a more comprehensive strategy for the coast is required.

Conclusion

The survey has illustrated the considerable variation amongst the promontory forts of the Solway Coast of Dumfries and Galloway. There are evidently complex sequences of construction and re-occupation at a number of sites and there remains the potential survival of significant evidence from some sites for cross-cultural contacts over a long period. However, the chronological range for the initial construction, occupation and abandonment of promontory forts on the North Solway Coast has yet to be established. The form and profile of the boundaries of an adequate sample of sites have not yet been determined, nor have the nature and status of the occupation and reoccupation of these sites been resolved. Evidence for the nature of the occupation of promontory forts must be collected if the relationship of these sites to their contemporary landscape, land-use and the greater settlement pattern is to be clarified. More evidence must also be gathered if a better understanding is to be attained of how the promontory forts of the North Solway Coast fit into patterns of maritime activity, such as local and long-distance trade; a research theme of more than local significance (Barclay 1997, 32).

If we are to enhance our understanding of the Galloway promontory forts further research and conservation priorities must be developed (Haselgrove et al 2001, 28), especially where voluntary public participation is hoped to play a role (Cressey & Toolis 1997, 478-9; Gilmour 2001, 3). The survival of these archaeological remains is threatened by a variety of factors. Coastal erosion, agricultural practices, animal burrowing and pedestrian traffic are currently and steadily reducing the archaeological remains of a significant number of promontory forts on the North Solway Coast. These threats, due inherently to the coastal location of these sites, must be addressed if these archaeological remains and the potentially significant evidence they hold are to be conserved for the future.

Acknowledgements

This research would not have been possible without the help of many people. I am especially grateful to the numerous landowners who readily allowed me to carry out the site surveys. Darren Miller, Francis Toolis, Fionn Toolis and Abigail Macdonald provided invaluable assistance in surveying the sites. Andrew Aspinall, Graeme Carruthers and Alan Hunter Blair prepared the illustrations for this paper. The Centre for Field Archaeology and the University of Edinburgh Archaeology Department

allowed the use of surveying equipment. Solway Heritage supported the presentation of part of this research at the A.R.P. conference, Dumfries, 1998. Historic Scotland provided partial funding for the preparation and publication of this paper. I would also like to thank Coralie Mills, Patrick Ashmore and Matt Ritchie for their helpful and constructive comments during the preparation of this paper.

The Society is indebted to Historic Scotland for a substantial grant towards the publication costs of this paper.

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Appendix B: *Intermittent occupation and forced abandonment: excavation of an Iron Age promontory fort at Carghidown, Dumfries and Galloway*

Intermittent occupation and forced abandonment: excavation of an Iron Age promontory fort at Carghidown, Dumfries and Galloway

Ronan Toolis*

with contributions by A Duffy, R Engl, J Evans, L Fouracre, M Horstwood,
F Hunter, A Hunter Blair, R Inglis, V Pashley and T Poller

ABSTRACT

Excavations at Carghidown demonstrate sporadic occupation of this promontory fort over a short period, during the late first millennium BC or early first millennium AD. The analysis of lead beads from this settlement adds support to growing evidence for copper mining in this area of Galloway at the time and suggests that the inhabitants were of some status within the local social hierarchy. The excavation also demonstrates that the site was only formally enclosed during the latter stages of its occupation and that within a year or two of this act of enclosure the ramparts were violently thrown down, the repair and construction of buildings within the settlement was abruptly halted and occupation ceased.

INTRODUCTION

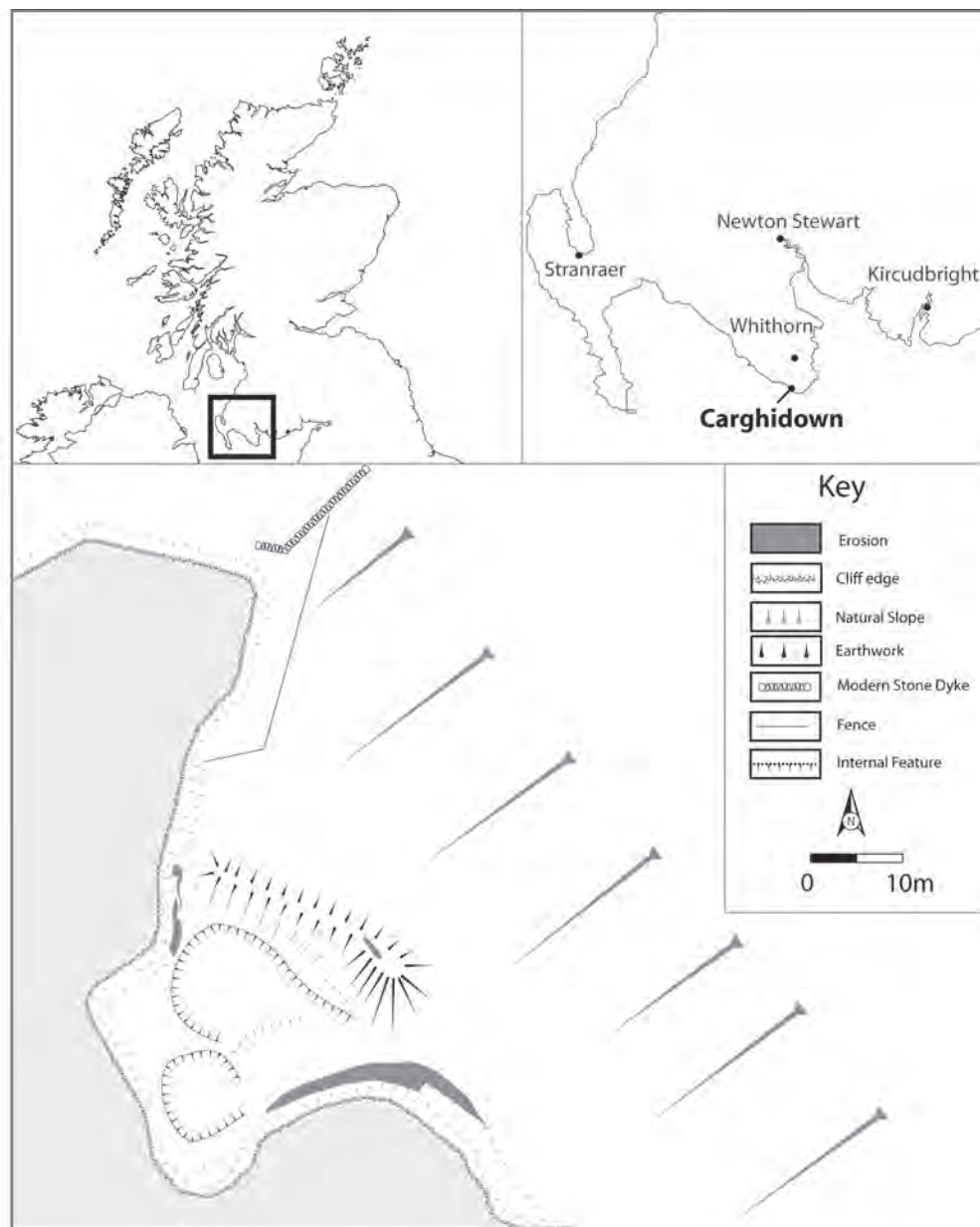
Over two seasons of fieldwork, during the summers of 2003 and 2004, the author directed the archaeological excavation of Carghidown promontory fort in response to coastal erosion and with the aim of investigating the primary occupation of a later prehistoric settlement within a lowland landscape in Galloway.

Carghidown is located on the western coast of the Machars peninsula, a few miles SSW of Whithorn (NGR: NX 4356 3507; illus 1). It lies approximately 30m above sea level on a promontory of till overlying a precipitous, fractured greywacke cliff containing sea caves (Cressey & Toolis 1997, 118) and at the foot of steeply seaward-sloping pasture fields. Being quite starkly overlooked by the immediate hinterland it seems an inherently indefensible location for a fortified settlement (illus 2).

The site is defined by a linear earthen rampart across the neck of a small square promontory approximately 400sq m in size (illus 1). The rampart rises to a significantly higher level above the interior ground level in comparison to the exterior ground level. A gap of around 2.8m between the rampart terminus and the cliff edge at the south-east corner of the site appears to form the original entranceway. Two circular depressions, one roughly 12m and the other roughly 8.5m in diameter, are evident within the interior of the site, the larger one being immediately behind the rampart. A small open area lies between the two circular features, the north-eastern entranceway and the south-eastern cliff edge.

Carghidown is one of 50 promontory forts recorded along the Galloway coast. Surveys of later prehistoric settlements in Galloway, including many promontory forts, have been carried out since the late 19th century (Wilson

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ILLUS 1 Site location plan

1885; Coles 1891; 1892; 1893; RCAHMS 1912; 1914; 1955; 1985; Feachem 1956). A survey of 16 of the Galloway promontory forts was carried out by the author between 1996 and 1997 and established that Carghidown was one of only five

on Galloway's Solway Coast currently affected by ongoing coastal erosion (Toolis 2003, 70). The survey and subsequent monitoring during the pilot Shorewatch scheme demonstrated localized coastal erosion of both the north-western and

south-eastern sides of the promontory, the soft till being gradually removed from the cliff edge by slope failure and constant weathering (Toolis 2003, 46–7). Since first described at the end of the 18th century (Davidson 1795, 287), Carghidown appeared to have been severely reduced by coastal erosion, with ongoing attrition (Toolis 2003, 47).

Of the five promontory forts identified during the survey as under threat, the impact of coastal erosion at three sites situated along the south-west coast of the Machars peninsula, Back Bay, Carghidown and Castle Feather, was of particular concern as each possessed comparatively rare, well-preserved remains of internal features, albeit secondary medieval features in the case of Back Bay and Castle Feather (Toolis 2003, 64, 70–1). Carghidown was identified as especially significant in preserving apparently undisturbed remains relating to the original prehistoric occupation of the site (Toolis 2003, 45–7, 64).

Previous excavation of coastal promontory or clifftop forts in Galloway has been limited to three sites. The excavation of McCulloch's Castle revealed artefactual evidence for occupation around the second century AD but no discernible structures within the heavily disturbed interior (Scott-Elliot 1964, 118–23). Cruggleton Castle, excavated in response to coastal erosion (Ewart 1985, 6), revealed that the earliest occupation of the site was represented by the partial remains of a roundhouse dated to the end of the first millennium BC or start of the first millennium AD (Ewart 1985, 12–14). A bronze bow brooch of the mid-first to mid-second century AD (Caldwell 1985, 64), albeit from a disturbed medieval context, provided further evidence of Iron Age occupation and led the excavator to suggest that the site was originally a promontory fort (Ewart 1985, 14), although no original ramparts were exposed. An exploratory excavation was carried out at the Mull of Galloway to investigate the



ILLUS 2 General view of Carghidown from north-west

two linear earthworks that cross the headland (Strachan 2000). This investigation revealed a set of closely spaced linear inner ramparts and a single linear outer rampart (Strachan 2000, 3–4) but no dating evidence. While comparisons have been drawn between the morphology of the closely spaced multivallate ramparts at the Mull of Galloway and Iron Age inland promontory forts in Ireland such as Knockdhu and Lurigethan (Strachan 2000, 30–1), it is difficult to make comparisons, in terms of scale and morphology, with other promontory forts on the Galloway Coast. Furthermore, while the evidence accumulated from McCulloch's Castle, Cruggleton Castle and the Mull of Galloway corresponds broadly with other promontory forts within the British Isles (Toolis 2003, 41), not one of these sites has yielded substantial evidence for the nature of the original occupation.

Contrary to previous observations (Feachem 1966, 76), the promontory forts of Galloway's coastline are not a homogenous settlement type distinct from the rest of the regional later prehistoric settlement pattern (Toolis 2003, 69). They do show, at least superficially, characteristics representative of enclosed settlements in Galloway. For instance, the use of building materials and the morphology of internal organization of promontory forts adhere to traits identified within inland settlements (Toolis 2003, 69). However, as others have observed, little is known about the majority of enclosed settlements within Galloway (Cowley 2000, 172), whether on the coast or inland. Even with the distinct concentration of promontory forts, crannogs and brochs, together with the perceived dominance of small, circular enclosed sites (Truckell 1984, 200), that apparently distinguishes the later prehistoric settlement pattern of Galloway from

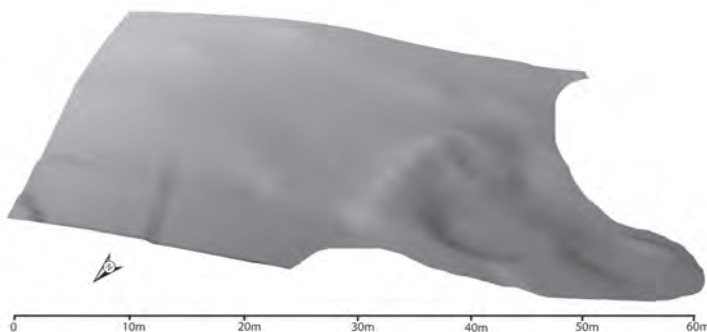
the lands east of the Nith and particularly south-east Scotland, there is a dearth of evidence (Armit & Ralston 1997, 187–8; Haselgrove et al 2001, 29; Banks 2002, 31), particularly from stratified contexts, to substantiate any kind of meaningful settlement pattern or associated underlying cultural identity.

The apparently undisturbed remains relating to the prehistoric occupation of Carghidown was therefore of special potential significance, as complex stratified deposits within any kind of later prehistoric settlement in Galloway are rare and, of the few modern excavations of later prehistoric sites in the region, most have tackled only cropmarks or plough-truncated sites (Haggarty & Haggarty 1983; Johnston 1994; Banks 2000; Gregory 2001; Cook 2006; MacGregor forthcoming). The excavation of Carghidown, therefore, sought to retrieve evidence that could be compared with information from the wider later prehistoric settlement distribution in Galloway.

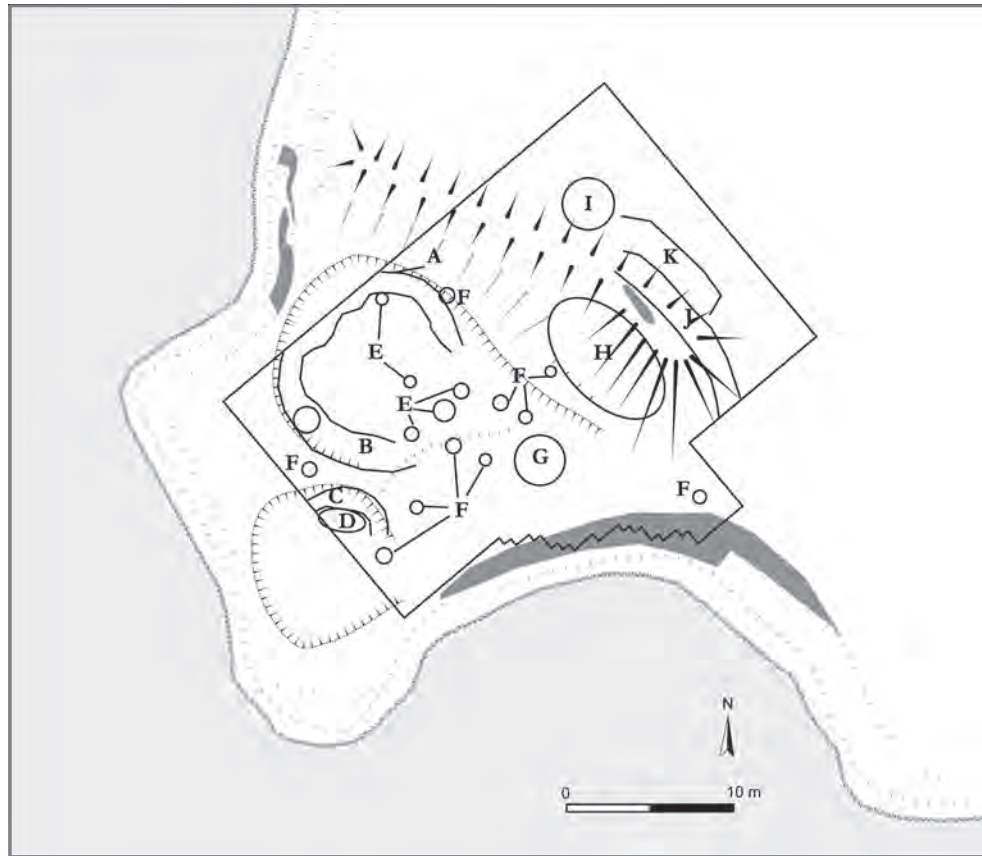
THE SURVEYS

Tessa Poller, Alan Hunter Blair and
Ronan Toolis

A contour survey was carried out using EDM surveying equipment in order to record in 3D the apparent surface features immediately prior to disturbance of the ground by evaluation



ILLUS 3 Contour survey



ILLUS 4 Geophysics survey

trenches during the first season in 2003 (illus 3). This contour survey confirmed the results of the site survey carried out by the author in 1996 (Toolis 2003, 46; illus 1), clearly revealing two circular hollow features within the promontory fort. The contour survey also demonstrated the steep gradient of the exterior land as it dropped towards Carghidown and the marked declivity between the rampart that defined the site and the interior of the promontory fort itself. The coastal edge of the promontory fort was surveyed again during the second season in 2004 and confirmed ongoing coastal erosion of both north-west and south-east sides of the neck of the promontory.

A geophysics survey was also undertaken immediately prior to the excavation in 2003 (Poller forthcoming; illus 4). Gradiometry was carried out using an FM 36 fluxgate gradiometer. Readings were taken every 0.5m within 20m by 10m grids. A total area of 600sq m was surveyed. The survey covered much of the internal area and extended beyond the rampart of the promontory fort. For both practical and safety reasons a distance of at least 2m was maintained from the cliff edge of the promontory. Each feature identified in the results of the survey has been given a letter and in the text this letter identifier, noted within parenthesis, follows the description of the feature.

The outlines of both circular hollows were each defined by a different magnetic character. The interior of the larger circular hollow was indicated by a slightly lower magnetic response than its exterior (A). This lower magnetic signature corresponded to an area of stones uncovered during excavation. Just inside, following the curve of its edge, there was a very diffuse band of even lower magnetic signature (1–3m wide; B). This may be the faint trace of a collapsed wall. No other evidence for a wall or ditch was identified.

By contrast, the outline of the smaller circular hollow appeared as a dark, high magnetic band, in all probability defining a ditch or a wall made out of a different material from the surrounding geology (C). This high magnetic band, approximately 1m wide and 5m long, was located on the north side of the hollow. Just inside this band was an area of low magnetism (D), perhaps an indication of stone foundations. These features appear to follow the curve of the hollow further to the south-west, outwith the area surveyed.

Although no other large distinct internal features were identified in either hollow, there were a few small (0.5m in diameter) scattered points of high and low magnetism within the larger hollow, which were thought to be traces of post-holes (E). However, excavation during the 2003 season revealed that the low magnetic anomalies correlated with areas where the bedrock was nearer the surface (see below). One high magnetic anomaly was targeted by excavation, but did not correspond to a specific feature. Similar small circular (<0.5m diameter) high magnetic readings were dotted around the survey area (F). Several formed a line that extended from the smaller hollow. Although these 'dots' may be geological anomalies, some of them may be archaeological features such as post-holes. Another of these circular features, located on the same alignment as the rampart, fell within the 2003 trench. However, no archaeological feature was found on this spot (see below).

A circular anomaly that produced a very low magnetic reading, approximately 5m in diameter, was identified halfway between the entranceway and the circular hollows (G). It was first thought that this might have been a pit. However, upon excavation it was shown not to correspond to anything archaeological. Therefore, it seemed most likely that npn-conformation within the geology had a big effect on the gradiometric readings.

Taking the effect of the bedrock into account, the area of low magnetism on the downward slope (H) at the rear of the rampart can also be interpreted as geological. The smaller features in this area had a higher magnetic reading and were slightly larger than the high magnetic 'dots', which could possibly be archaeological.

There was another area of contrastive high and low magnetism 5m to the north-east of feature (H), located outside the rampart (I). An area of high magnetism was flanked by a low magnetic anomaly producing a dipole approximately 5m by 4m. This anomaly indicated an area of high burning or an object that was highly ferrous. The latter interpretation was demonstrated by the 2004 excavation (see below).

The rampart itself did not appear clearly on the gradiometry results. However, immediately to the north-east (outside) of the rampart there was a linear anomaly that paralleled the line of the rampart for approximately 10m. This anomaly was characterized by a band of lower magnetism (J), approximately 2m wide, flanked on the north side by an area of higher magnetism (K) and which indicated the traces of an external ditch. Feature (I) abutted the end of the higher magnetic band and therefore indicated perhaps a feature located within the rampart.

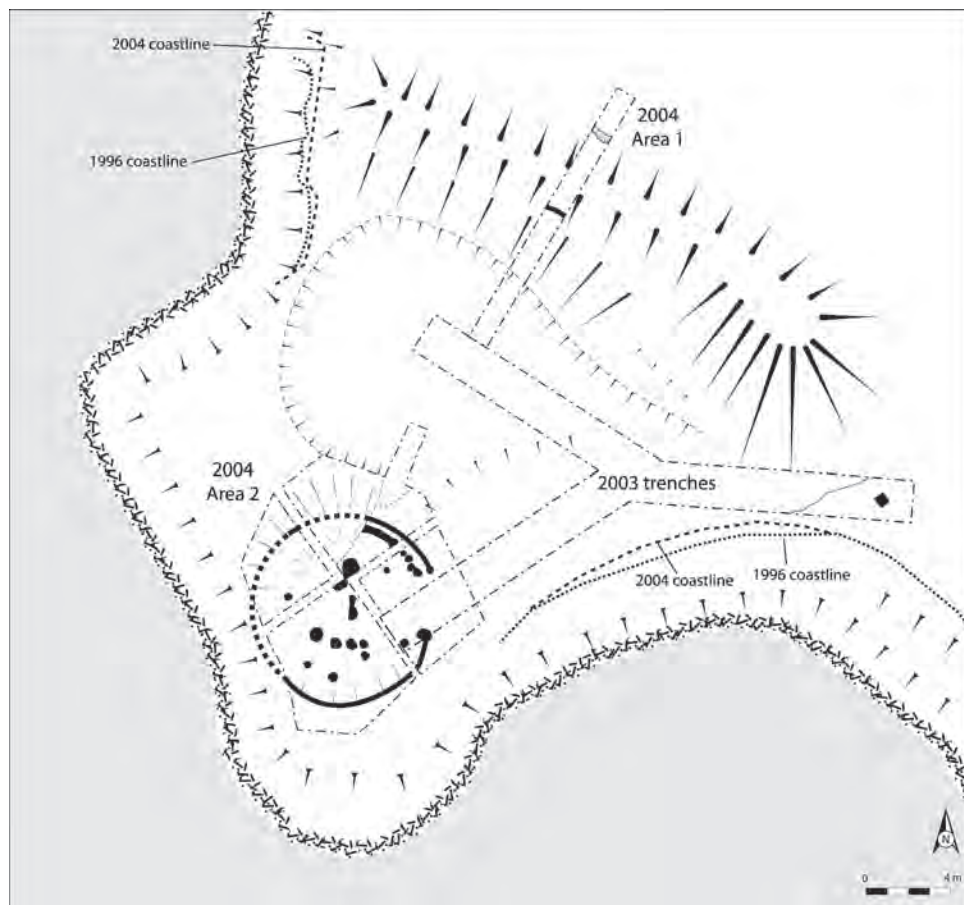
In sum, the results of the gradiometry survey show that the construction, or at least the preserved state, of the two hollows was different. The interior of the larger hollow failed to produce any clear features, such as a hearth. However, there were a few possible indications

of post-holes outwith the circular hollows. Although the rampart was a prominent feature topographically, unsurprisingly its magnetic response was not dissimilar to the underlying geology. However, there were likely traces of an external ditch, within which there was a ferrous deposit.

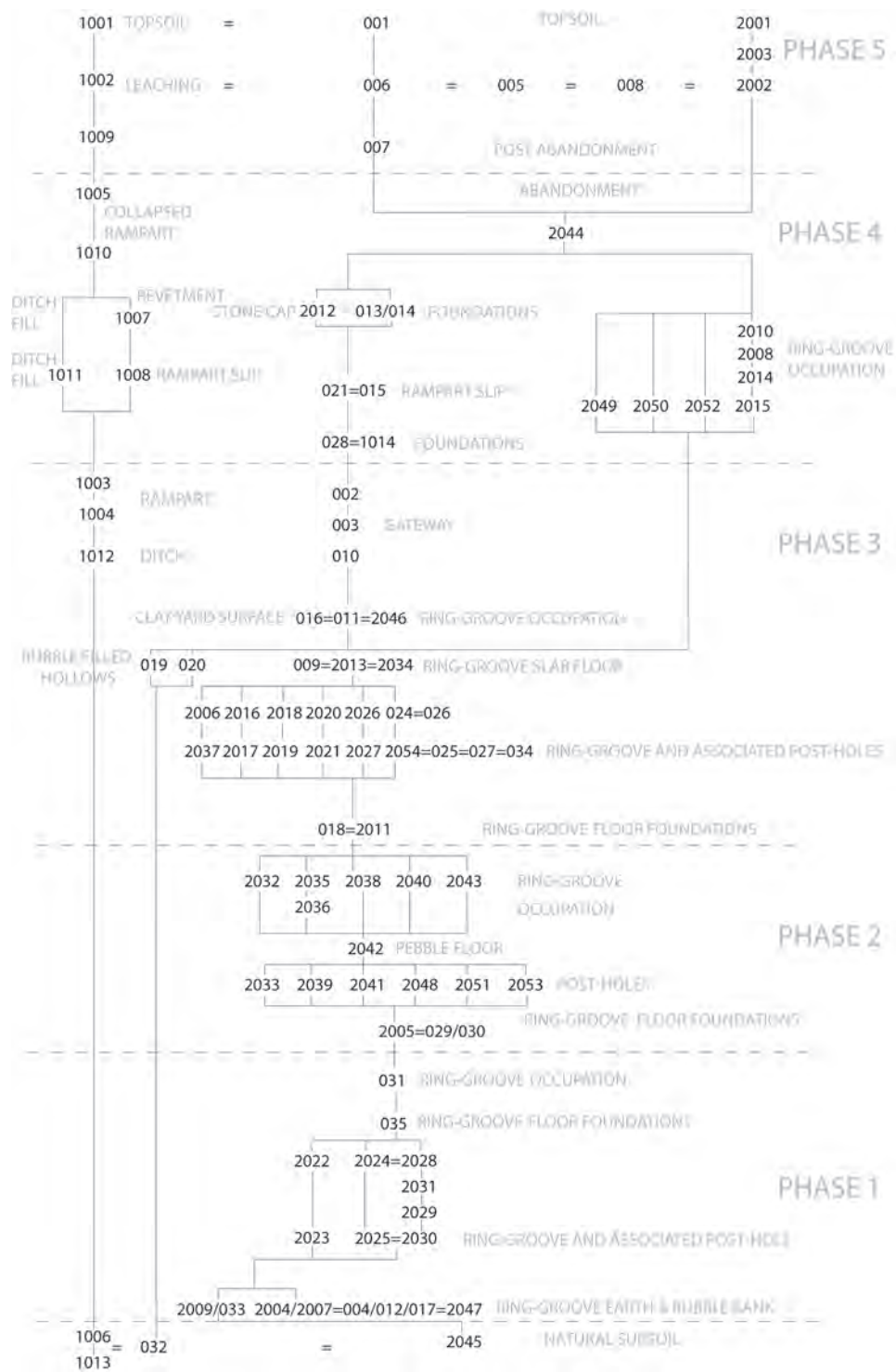
THE EXCAVATIONS

The excavations examined a variety of features within trenches covering 190sq m (illus 5). The strategy was to examine each of the constituent parts that defined the site: the rampart; the larger circular hollow immediately behind the rampart; the smaller

circular hollow at the southern corner of the site; the open space between the two circular hollows; and the entrance space. The first season in 2003 was planned as an evaluation, to identify which parts of the site were worth targeting for excavation. To achieve this, two trenches were excavated, close to the southern area of the promontory most at risk from coastal erosion. These trenches revealed the archaeological potential of the circular hollows, the open space and the entrance space. Only one area, the smaller circular hollow at the southern corner of the site, was shown to have a significant depth of potentially complex archaeological deposits. That these deposits were within what appeared to be the interior of a roundhouse was particularly valuable as these deposits could thus provide evidence relating to the occupation of the site.



ILLUS 5 Excavation plan



ILLUS 6 Harris matrix of Carghidown excavations

During the second season of fieldwork in 2004, the main target of the excavation was therefore the smaller circular hollow (Area 2). Another trench (Area 1) extended from the northern edge of the 2003 trench within the larger circular hollow, up over the rampart and across into the external ditch at the point where the ferrous anomaly had been noted during the geophysics survey.

The underlying natural subsoil predominantly comprised very compact orange/grey brown silty sand, gravel and fractured bedrock. Natural subsoil was encountered at varying depths across the site.

PHASE 1 RING-GROOVE

The earliest demonstrable stratigraphic feature (illus 6) overlying the natural subsoil (context 2045) was the curvilinear earth and rubble bank (context 2004/2007) at the southern corner of Carghidown, which defined a circular space (illus 7). This 0.35–0.45m high bank comprised a very compact light greyish brown silty sand matrix enclosing angular greywacke stone rubble. An outer face of greywacke stones (context 2047) defined its south-east side immediately south of a gap in the bank. Only one artefact, a circular water-worn cobble (SF 4425.06), was recovered from the base of the east quarter of the bank, close to the stone surface (context 2009/033) that appeared to define a gap in the earth and rubble bank. Relatively substantial amounts of charcoal were also recovered from the matrix of the bank.

The top of the earth and rubble bank (context 2004/2007) was cut by a circular ring-groove (context 2025/2030) trench that defined a space c9m in diameter. The ring-groove itself was largely filled on its south, west and north sides by vertical greywacke packing stones (context 2029) that defined spaces around 0.08m wide, set at least 0.33m

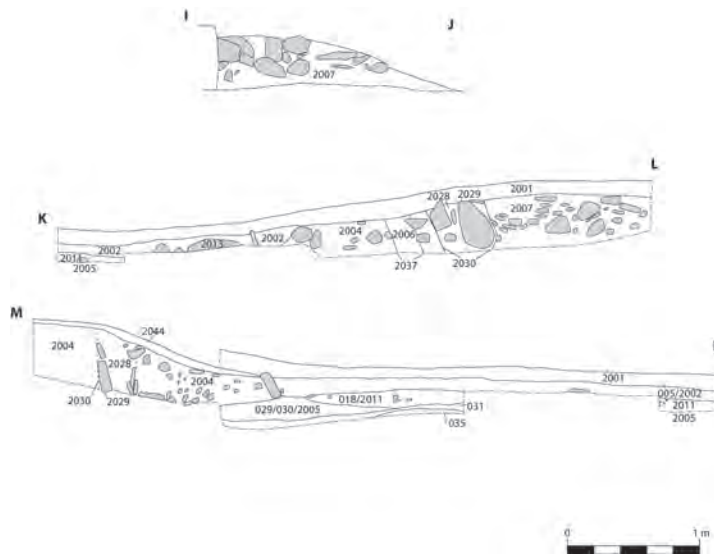
deep into the earth and rubble bank (illus 8 & 9). A single post-hole (context 2023) that cut through the enclosing bank (context 2004/2007) appeared to form the terminus of the ring-groove trench at the north side of the eastern gap in the earth and rubble bank. A deposit of clay (context 2031) was recovered from the interior face of the packing stones (context 2029) filling the south part of the ring-groove. The silty sand (context 2024/2028) filling the ring-groove contained charcoal fragments.

The margin of the internal space defined by the ring-groove was obscured by collapse from the surrounding earth and rubble bank (context 2004/2007). Excavation revealed that the true inner edge of the bank defined an interior space c6.4m in diameter. Abutting this inner edge, and only revealed



in a sondage at the eastern end of the 2003 evaluation trench, was a compact, mottled light brown silty clay layer (context 035), the foundation for a 0.12m deep overlying layer of compact, mid-greyish brown sandy silt (context 031) with frequent inclusions of small stones and gravel, representing a probable floor surface. The remainder of this layer and any demonstrable relationships with post-holes were not exposed during the limited duration of the excavation.

The second phase of activity within the ring-groove was represented by a silty sand foundation layer (context 2005/029/030), for another floor surface (context 2042; illus 10), which overlay the earliest floor surface (context 031). This foundation layer (context 2005/029/030) was cut by a number of post-holes (2039, 2041, 2048, 2051 & 2053). Many of



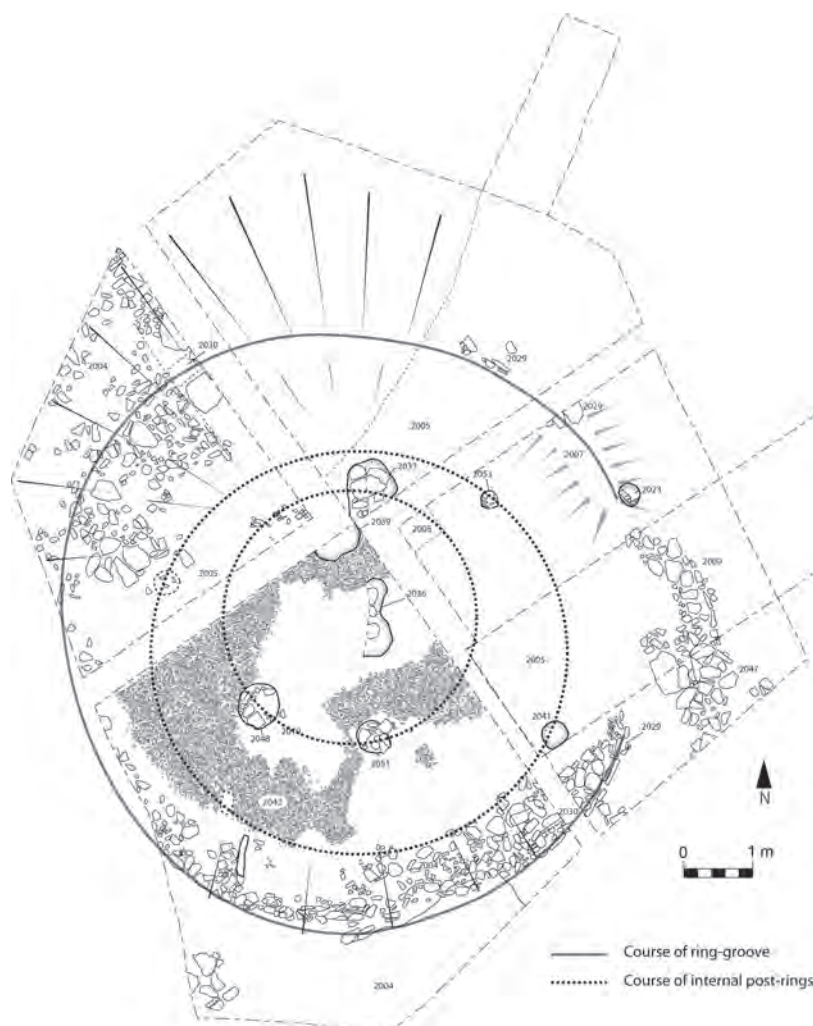
ILLUS 9 Baulk sections through ring-groove

the post-holes contained charcoal flecks and packing stones that defined the diameters of the posts. Post-holes 2048 and 2051, and possibly Post-hole 2039, appeared to form part of an inner post-ring, 3.8m in diameter, composed of posts between 0.20m and 0.25m in diameter. Post-holes 2041 and 2053 and another couple of unexcavated post-holes within the west part of the ring-groove appeared to form part of a 6.1m diameter post-ring set close to the inner edge of the bank (context 2004/2007), composed of posts around 0.12m in diameter. Abutting the packing stones of the post-holes was the floor surface (context 2042), composed of a very compact rounded pebble surface 0.03m deep within a matrix of compact greyish brown silty sand, occupying predominantly the southern quarter of the ring-groove interior. A possible 'figure of eight'-shaped pit (context 2036) from the fill (context 2035) of which a heat-fractured stone was recovered cut this floor surface (illus 11). Another large pit or post-hole (2033) filled with compact, mid-brown silty sand (context 2032) with frequent inclusions of large angular and rounded stones, including a possible post-pad, cut the floor surface to the north of the central area of the ring-groove. The floor surface (context 2042) abutted the inner edge of earth and rubble bank (context 2004) and was overlain by a very thin layer of compact dark brown silty sand with occasional inclusions of grit (context 2043).

PHASE 3 RING-GROOVE, OPEN SPACE, ENTRANCE, RAMPART & DITCH

The third phase of activity within the ring-groove structure was represented by a fragmented bedrock and gravel foundation base (context 018/2011) for another floor surface, which overlay the pebble floor (context 2042) and its associated occupation features over much of the ring-groove interior (illus 12). This third floor surface was composed of large, flat greywacke slabs 0.06m thick (context 009/2013/2034) and abutted the inner edge of earth and rubble bank (context 2007/2004).

It is possible that this third phase was associated with the partial replacement of the north side of ring-groove (context 2025/2030) by another trench (context 2037; illus 8, 9 & 12), though with no great alteration to the overall diameter. This ring-groove (context 2037) truncated the inner edge of the previous ring-groove on its north side, and cut through the bank into underlying natural subsoil (context 2045) in the northern quarter. Though thin greywacke packing stones were recorded within this ring-groove, they appeared disturbed and it was not possible to define any specific stone-edged slot within the ring-groove trench that might indicate the width of the posts or planks set into it. The north-eastern course of the ring-groove appeared to develop into a series of post-holes (2017/2019/2021/2027), defining posts perhaps 0.06–0.10m in diameter (illus 11), before it reached the north limit of the paved gap (context 2009/033) at the eastern side of the structure. Another large post-hole (2054), containing large, angular vertically set greywacke packing stones that defined a 0.20m diameter post, but which perhaps replaced post-holes from previous phases (contexts 025, 027 & 034), formed the south-east terminal of the ring-groove (context 2006), which continued in use unaltered around the southern quarter. The individual post-holes within the course of this ring-groove were filled with silty sand (contexts 024/026/2016/2018/2020/2026) containing no charcoal.

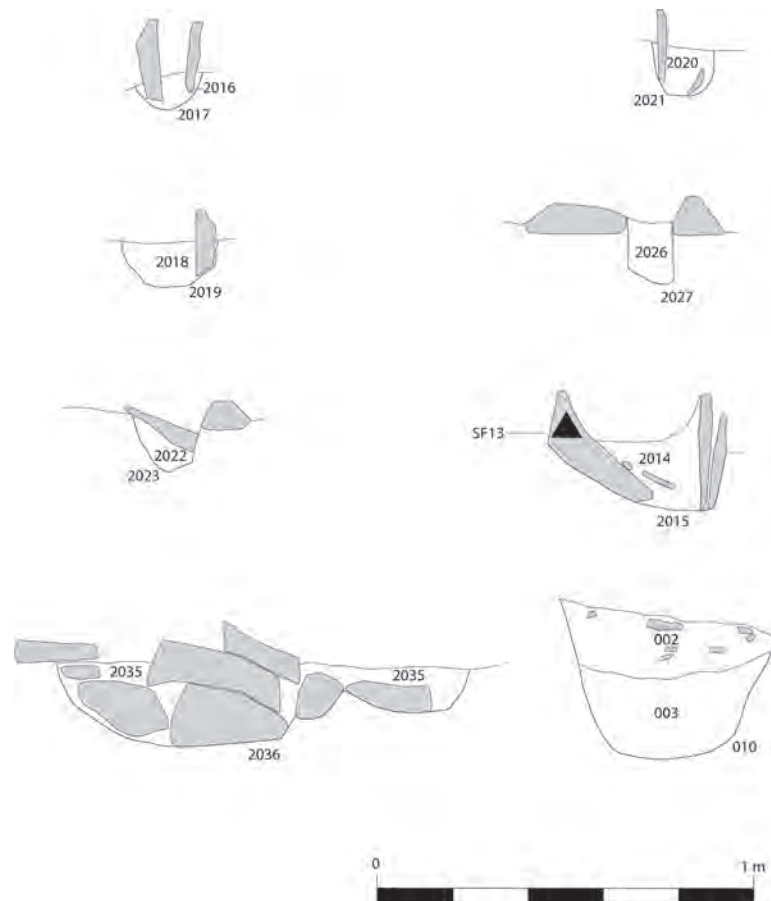


ILLUS 10 Phase 2 plan of ring-groove

Overlying the stone paved surface (context 2009) that defined the eastern gap in the ring-groove and the eastern edge of the paved floor (contexts 009/2013/2034) belonging to this third phase of activity, was a clean clay surface (contexts 016/011/2046) that appeared to cover the entirety of the open space to the north-east of and outwith the ring-groove (illus 12 & 13). No features were apparent on the surface of this silty clay (context 011), which excavation demonstrated covered discrete pockets of rubble (contexts 019 & 020) that filled hollows in the underlying bedrock (context

032). The only artefacts to be recorded from the clay layer (context 011), immediately east of the stone paved surface (context 2009/033), were three lead beads (SF 3921.19.1–3) found together within the matrix of this layer.

A silty clay layer (context 011/016) extended across the open space north-east of the ring-groove, apparently as far as the rampart and up to the entranceway to the site. Excavation of the entranceway revealed that this silty clay layer (context 016) was cut by a large square post-hole (context 010) (illus 13). This post-hole was filled with silty clay (contexts 002



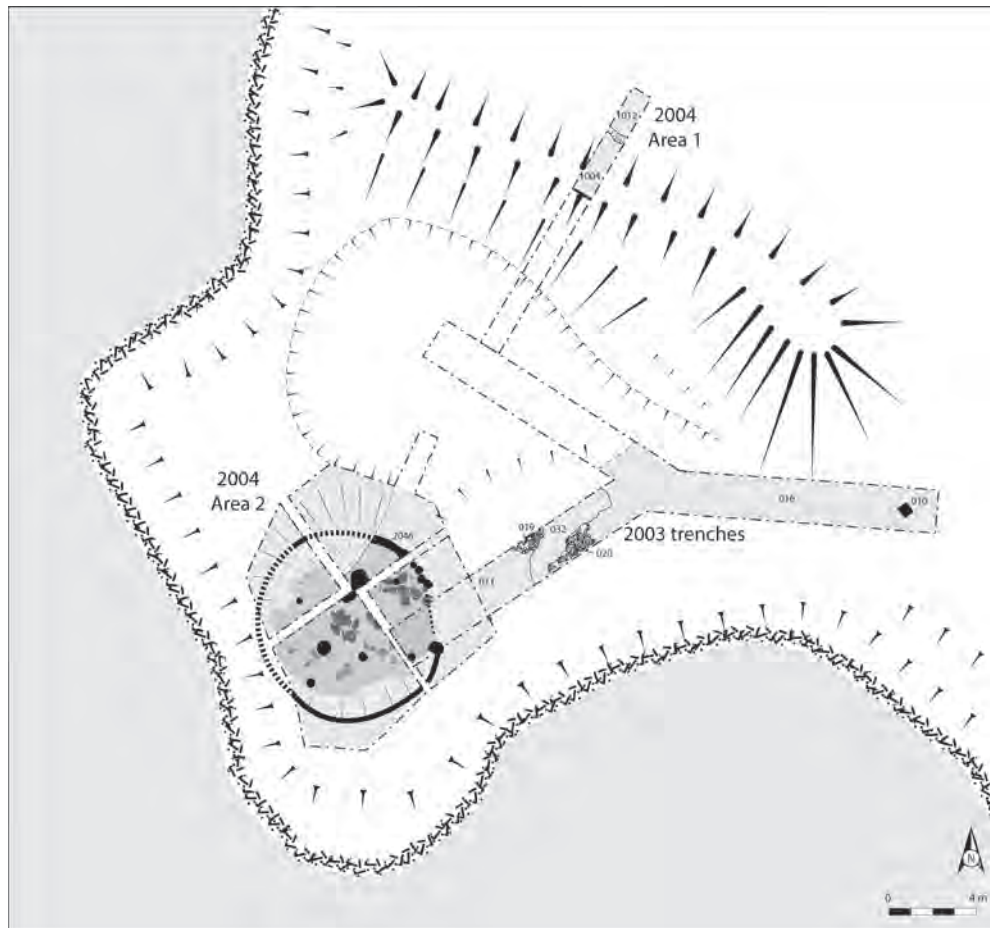
ILLUS 11 Pit and post-hole sections

& 003), the secondary fill (context 002) yielding two fragments of fuel ash slag.

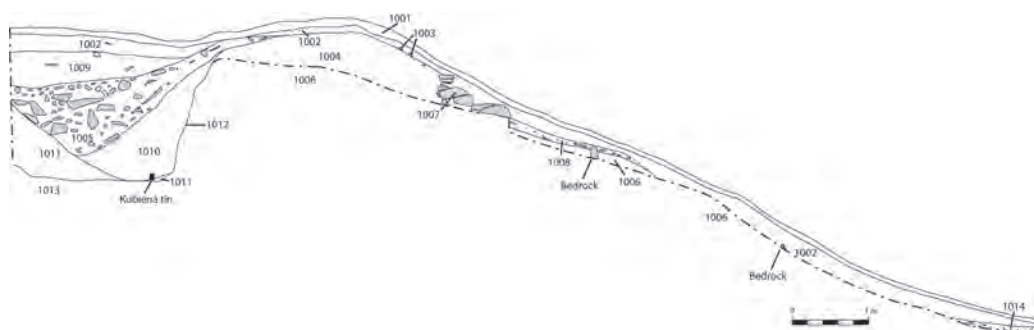
The rampart was composed of an earth bank (context 1004) of compact, moderately/poorly sorted, dark greyish brown sandy silt with moderate inclusions of small angular stones (illus 13 & 14). This appeared to be very similar to the natural subsoil (context 1013) but with less frequent inclusions of stones. This earthen dump rampart was up to 0.60m high above the original ground surface (context 1006) and 3m broad at its base (illus 14 & 15). No palisade trench or posts were apparent either within or under the bank. A thin, rubble spread (context 1003) was apparent running over the top of the inner (south-western) side of the rampart, similar to the rubble spread (context 1005) on the outer (north-eastern) face of the rampart that

continued into the ditch that immediately fronted the rampart. A spread of rubble on the inner side of the rampart (context 1008) had apparently slipped some distance down the natural slope before the remaining deposit was consolidated by a drystone revetment (context 1007) that directly overlay it. This drystone revetment (context 1007) was the only structural feature apparent on the rampart and was two courses wide and two courses high. It comprised a base of large flat angular greywacke blocks topped by a rough course of smaller angular stones. The external ditch (context 1012) had a near vertical inner (south-western) side (illus 14) and a square cut profile. It measured 1.5m deep from the base of the rampart and had a flat base 1.75m wide. The base of the outer side of the ditch was just apparent at the northern edge of

Post-holes (context 2015) and (context 2049) formed part of an inner post-ring on the same course as previously used around the centre of the ring-groove while Post-holes 2050 and 2052 were added to the post-ring around the interior edge of the earth and rubble bank (context 2004). The packing stones of Post-hole 2015 not only re-used slabs from the paved floor (contexts 009/2013/2034) but a saddle-quern composed of mica schist (SF 4225.13), that defined a 0.30m square post, subsequently filled with soft, very dark greyish brown sandy silt (context 2010) with charcoal inclusions. The packing stones of



ILLUS 13 Phase 3 plan of Carghidown



ILLUS 14 North-facing section of rampart and ditch



ILLUS 15 South-facing section of rampart

Post-hole 2049 of the inner post-ring defined a square post *c* 0.20m. The posts defined by the packing stones of Post-holes 2050 and 2052 were also of similar dimensions. There was no floor surface associated with these post-holes, however, as the vertical packing stones protruded 0.09m above the previous paved floor surface (contexts 009/2013/2034). Overlying the southern quadrant of the interior was a compact, dark greyish brown sandy silt layer (context 2008), 0.03m deep, with frequent inclusions of charcoal. A thin and partial spread of collapsed rubble from the earth and rubble bank (context 2004/2007) overlay this deposit and was itself sealed by a thick layer of leached subsoil (context 2002). Chipped stone artefacts comprising pounders, rubbers and a chiselled stone (SF nos 4225.01, .02, .03, .10, .11, .12 & .14) were recovered from the surface of the inner face of the southern part of the earth and rubble bank (context 2004). While these artefacts could derive from the earlier occupation phases, this could not be demonstrated and so these artefacts are attributed to the last phase of occupation identified.

The southern edge of the larger circular hollow, to the north of the ring-groove, was defined by a stone

cap (context 2012) of extremely large flat greywacke stones and beach boulders excavated into the crown of the ring-groove earth and rubble bank (illus 16 & 17). Much of the *c* 10.5m diameter base of this hollow comprised a rubble spread (context 028/1014) of angular greywacke stones over 0.22m deep (illus 17). The rubble spread (context 028) was overlain by an intermittent silty clay deposit (context 013/014), similar in composition to context 011 but separated stratigraphically by Deposit 015, which appeared to represent slippage from the rampart and underlay the clay deposit (context 013/014) and overlay the silty clay layer (context 011). A layer of bedrock fragments (context 2044) capped the north-east and south sides of the earth and rubble bank enclosing the southern ring-groove. This material, which appeared to respect the primary and secondary ring-groove trenches (contexts 2030 & 2037), extended north across the rubble spread (context 028/1014) of angular greywacke stones that filled the larger northern circular hollow (illus 8, E–F).

A thin rubble spread was apparent on the inner (southern) side (context 1008) of the rampart (illus 14), where it had apparently slipped some distance

down the natural slope before being consolidated by the drystone revetment (context 1007). Further deposits of slippage from the rampart overlaid the clay layer (context 011/016) covering the open zone and entranceway (illus 17). These deposits (contexts 015 & 021) comprised a layer of friable orangey brown sandy gravel mixed with small–medium angular stones.

The ditch outside the rampart was filled with a greyish brown primary silty sand deposit (context 1011), similar to the natural subsoil and apparently

derived mainly from the outer side of the ditch, and a secondary deposit of greyish brown silty sand (context 1010) derived from the rampart above the inner side of the ditch and sealed by large unmortared greywacke stones (context 1003/1005), aligned either flat across or angled diagonally across the entirety of the ditch (illus 18) and again derived from above the rampart on the inner side of the ditch (illus 14). No finds were recovered from either the underlying ditch-fill deposits or the matrix of the rampart.



ILLUS 16 Phase 4 plan of ring-groove

PHASE 5 POST-ABANDONMENT

A deposit of angular stone rubble (context 007) mixed with a leached soil layer (context 006) containing a sherd of modern white china pottery, overlay the thin clay deposit (context 013/014) in the larger northern circular hollow.

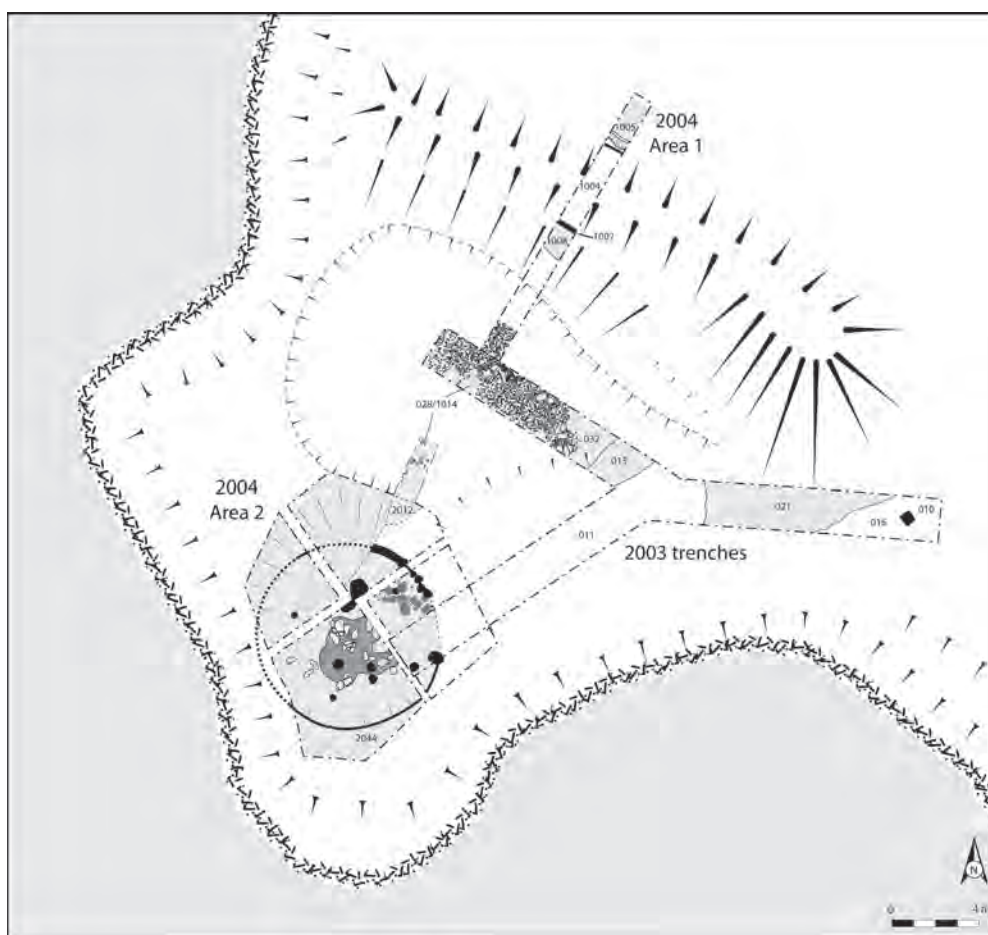
The uppermost fill (context 1009) of the external ditch comprised a sandy clay layer (illus 14), which was sealed by a layer of leached subsoil (context 1002), containing worked stone and a concentration of modern iron nail fragments, the source of the anomaly identified during the geophysics survey (see above). This layer of leached, buried subsoil (context 1002/006/005/008/2002) overlay the entire site and underlay the turf and topsoil, which comprised soft

dark brown humic silt with frequent bioturbation and a moderate amount of modern detritus, comprising iron nails, coal, glass, white china pottery, a button and a bullet case.

LEAD BEADS

Fraser Hunter

Three lead beads (SF 3921.19.1–3) were recovered together from the clay surface (context 011). The beads were well-sealed in this layer, and were found together just beyond the ring-groove wall, outside the entrance (illus 12). All are broadly similar, being barrel-shaped, slightly irregular in form, with a swollen centre and slightly narrowed



ILLUS 17 Phase 4 plan of Carghidown

ends (illus 19). They are hammered from rolled sheet around 1.5mm thick. Their form suggests they are beads rather than weights. One end of the most intact example (SF 3921.19.3) is blocked by a small separate piece of lead. Detailed descriptions are given below. There is little visible sign of surviving metallic lead, with the vast majority converted to powdery white corrosion products, probably cerussite (lead carbonate). Overlying this in places (most extensively on SF 3921.19.2) is a friable layer of darker corrosion. Surface XRF analysis indicated the beads were pure lead rather than an alloy such as pewter; no detectable trace of silver was noted.

CATALOGUE OF LEAD BEADS

SF 3921.19.1 The edges of the rolled sheet (T 1.5mm) are overlapped round *c* 25% of the circumference, ensuring they would not spring open. One end of the bead is intact, the other slightly damaged. Perforation D 4mm; L 17.5mm; D 9.5–10mm. Mass 5.53g.

SF 3921.19.2 The edges overlap around a quarter to a third of the circumference; part of the outer edge has been lost, and the ends are slightly damaged. Perforation D 4mm; sheet T 1.5mm; L 18.5mm; D 10.5–11mm. Mass 6.00g.

SF 3921.19.3 Slightly larger than the others, and intact apart from minor damage, with the edges overlapping around half the circumference. One (narrower) end is blocked by corrosion, while the other is blocked by a separate piece of lead within it. This is firmly set, and appears to be deliberately placed there. Perforation D 3.5–4.5mm; sheet T 1mm; L 21mm; D 9–10mm. Mass 4.49g.

LASER ABLATION PB ISOTOPE ANALYSIS OF THE LEAD BEADS

Vanessa Pashley, Jane Evans and Matt Horstwood

The three lead beads from Carghidown, and three control samples, one from Scotland and two from the Isle of Man, were received as a small project to undertake a laser ablation provenance study on the beads. The aim of the study was to assess, from the lead composition of the beads, whether the lead used in their production bore more similarity to Scottish or Isle of Man lead sources. The control samples comprised two fragments of Iron Age/Early Medieval

lead slag from Cass ny Hawin (IOMMM Accession Number 1960-0028) and a sample of processed lead of positive provenance from the Leadhills in Southern Scotland.

Analysis of the Isle of Man sample and the Carghidown beads took place using a New Wave Research 266nm Nd:YAG laser ablation system attached to a VG Axiom MC-ICP-MS (multicollector inductively coupled plasma mass spectrometer). Samples were placed, in turn, into the laser sample chamber, and a small area of each was pre-ablated to remove any loose surface debris. Data were then acquired using the following laser sampling conditions: 75µm spot, 4Hz, power range = 19–23%. A 10ppb solution of thallium was co-aspirated during each ablation to allow for the correction of instrument induced mass bias. For each analysis, 40 ratios were collected at three-second integrations. Each sample was analysed at least in triplicate.

The precision and accuracy of the method were assessed through repeat analysis of the matrix-matched NBS 981 ablation standard (NBS 981 wire), using the same laser sampling and acquisition procedures. The average values obtained for each of the measured NBS 981 ratios were then compared to the known value for this standard (Thirlwall 2002). All sample data were subsequently normalized according to the relative daily deviation of the measured standard value from the true. Normalization to an international standard in this way effectively cancels out the effects of slight daily variations in instrumental accuracy, and allows the direct comparison of the data.

The Leadhills sample was too large to be put into the laser sample chamber intact. It was therefore analysed in solution mode using the following procedure. A small section of the sample surface was cleaned by repeated applications of Teflon distilled 2% HNO₃. A *c* 0.05ml aliquot of the 2% HNO₃ was then placed on the cleaned area and left for five minutes. This aliquot was then pipetted off into a sample vial, diluted with further 2% HNO₃, doped with thallium and analysed by aspirating through a 50µl/min PFA nebulizer tip into a Cetac Aridus de-solvating nebulizer, attached to the MC-ICP-MS. The sample was analysed in duplicate, with each analysis comprising 75 ratios collected at five-second integrations. A 100ppb solution of NBS 981 (doped with 10ppb Tl), acted as the standard against which the sample data produced was normalized.

The result data are plotted on ²⁰⁶Pb/²⁰⁴Pb vs ²⁰⁷Pb/²⁰⁴Pb (illus 20) and also ²⁰⁷Pb/²⁰⁶Pb vs ²⁰⁸Pb/²⁰⁶Pb

(illus 21). The most radiogenic samples were from the Isle of Man slag samples with the highest $^{206}\text{Pb}/^{204}\text{Pb}$ and $^{207}\text{Pb}/^{204}\text{Pb}$ ratios (illus 20). The least radiogenic was the sample from Leadhills and the three beads from Carghidown plotted between the control samples, but closer to the Scottish sample. The same pattern was repeated in the plot of $^{207}\text{Pb}/^{206}\text{Pb}$ vs $^{208}\text{Pb}/^{206}\text{Pb}$ (illus 21).

The results suggest that the beads have a closer affiliation to the Scottish Leadhills source of lead than the Isle of Man. However, this conclusion should be set in the context that there is considerable overlap in the fields of geological data (Parnell & Swainbank 1984; Haggerty et al 1996) from British ore fields and a firmer conclusion could be made only if better datasets were available for archaeological specimens. Unfortunately, such data are not currently available.

DISCUSSION OF THE LEAD BEADS

Fraser Hunter

The Carghidown beads are highly unusual in both material and form for the pre-Roman Iron Age (radiocarbon dates (see Duffy below) indicate a date in the period *c* 360 BC–AD 60). This discussion will first review Iron Age lead use and consider parallels for Carghidown before assessing the role of lead in early metallurgy in Scotland. The evidence for early mining in Galloway will then be examined. Finally, potential reasons for the beads' deposition will be discussed.

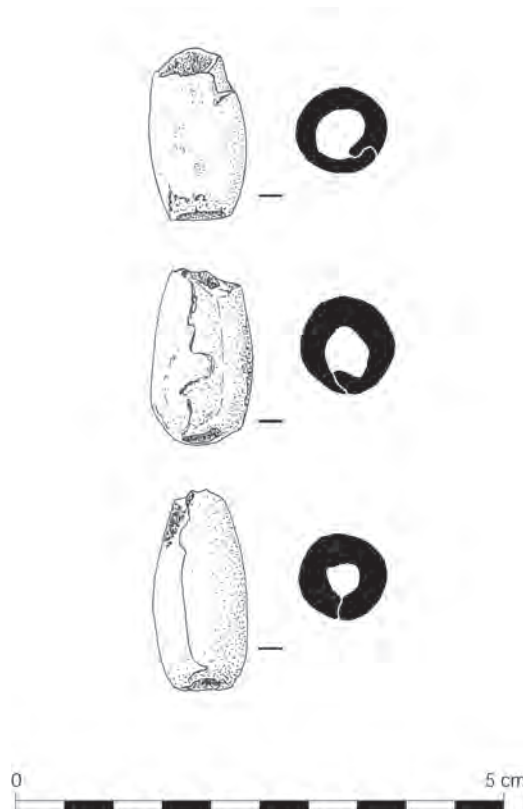
Lead objects are extremely unusual in the Iron Age; Table 1 lists the evidence known to the writer. There are dating difficulties, as most are old finds from poorly dated sites; thus some may be later intrusions, while dates gravitate to the Roman Iron Age because this is the most archaeologically visible period. However, apart from Carghidown, there are only two other securely pre-Roman instances of lead objects, from Howe (Orkney) and Laws, Monifieth (Angus). Otherwise it seems its use in any quantity



ILLUS 18 North-facing section of ditch

arises from contact with the Romans, who made abundant use of lead: the lead-rich Iron Age sites (notably Traprain Law, East Lothian; Fairy Knowe and Leckie, Stirlingshire) all had extensive Roman contacts (MacKie 1982, 71; Hunter 1998a).

Other uses of lead should also be considered: as an additive to copper alloys to ease casting, as a crucial component of solder and as a handy form of fixing. Lead was used to secure iron objects, such as the fastening rods of massive terrets (eg Leeds 1933, 123) or the knife blade in an antler handle from Kilpheder wheelhouse, South Uist (Lethbridge 1952, 185); here too the evidence is apparently Roman-period or later. The use of solder has been little-studied, but Scottish examples again seem to be of Roman Iron Age date (eg the Deskford carnyx and the Lamberton cups; MacGregor 1976, nos 293, 295; Hunter 2001, 78). In any event solder, a specialist product which required access to tin, may not have been made locally. As for lead in castings, although leaded bronzes were common in the Late Bronze Age, they did not apparently play a major role in Iron Age metalworking. Dungworth's (1996, 402–3) synthetic study indicated that lead was a rare addition to northern British alloys; other work provides further examples, although generally from around the Roman period (eg Tate et al no date). Overall it seems that lead, while not unknown, saw little use until the Roman Iron Age, contacts with



ILLUS 19 Lead beads; from top SF 3921.19.1, SF 3921.19.2 & SF 3921.19.3

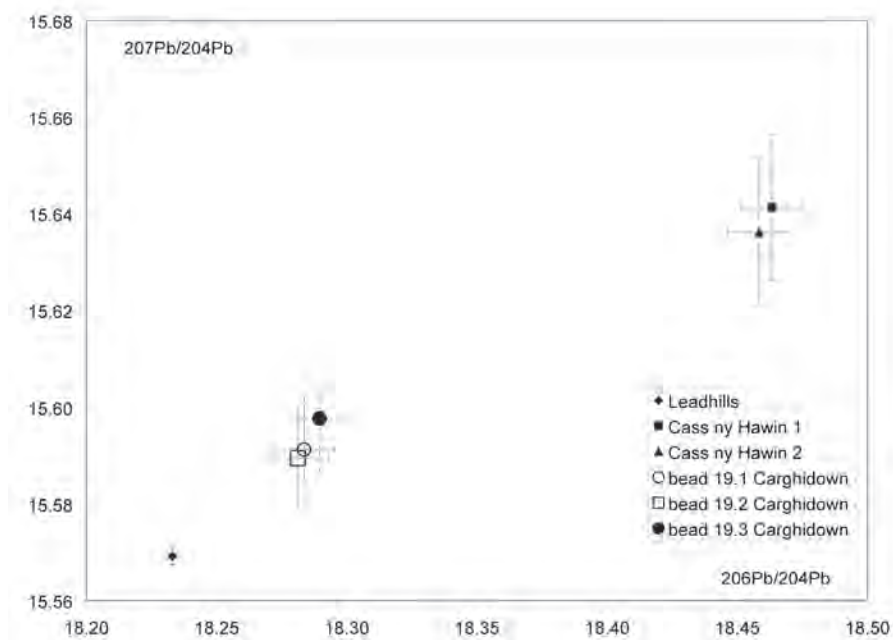
Rome being the main source of material (though the caveat about dating bias should be borne in mind). Carghidown is thus a rare exception to the general pattern.

Lead was little used in ornaments. There are only two other examples of beads, from Lochspouts (Ayrshire) and Traprain (East Lothian). Neither are similar in form: they are annular D-sectioned rings, the high degree of finish suggesting they were beads rather than whorls (Munro 1882, 312; Curle & Cree 1921, fig 24 no 25). The range of lead objects is strongly functional, making use of the material's weight and malleability for weights and whorls. There are also a large number of enigmatic items, and plenty of manufacturing debris in the form of ingots, rods and offcuts. Morphological parallels for the Carghidown beads remain elusive. The form is not readily paralleled in the Iron Age, where beads (typically of glass or cannel coal and related substances) were

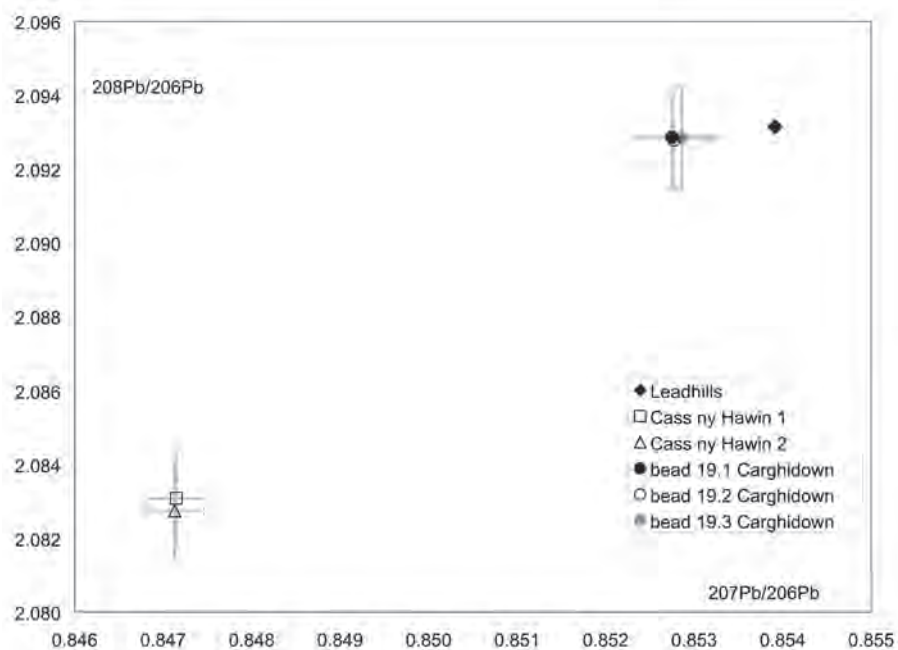
generally discoidal or globular, and metal beads are all but unknown apart from the distinctive elements of torcs (MacGregor 1976, nos 198, 202, 204–5). Thus, in both material and form, the Carghidown beads are extremely unusual. However, they would be easy to make, and are likely to represent a local experiment with this unusual material.

Turning to the source of the lead, the isotope analysis report (Pashley, Evans & Horstwood above) hints at the Southern Uplands. This is supported by comparison to a wider range of published data (Rohl & Needham 1998, plot 16); the Carghidown results plot within the Southern Uplands field (albeit near the edge). Admittedly patchy evidence confirms the early use of Scottish lead ores: the isotopic analysis of Early Bronze Age lead beads from West Water Reservoir, Peeblesshire, and of a Roman ingot from Strageath, Perthshire, indicate use of Southern Uplands sources (Frere et al 1989, reinterpreted in Hunter 1998a; Hunter & Davis 1994; Rohl & Needham 1998, 111), while antiquarian records suggest prehistoric mining at Leadhills and Wanlockhead (Wilson & Flett 1921, 1).

Specific evidence for use of Galloway ores is less clear. Although there are extensive metal-rich deposits associated with the Cairnmore granite intrusions at the head of Wigtown Bay (Wilson & Flett 1921, fig 6), there is as yet no evidence for their early use, although this is unsurprising given the general neglect of early mining studies in Scotland. Lead is known in a number of historic mines in the area, and in at least one instance (East Blackcraig), lead and copper co-occur (Wilson & Flett 1921, 48–51, 128–9). This is significant, as one potential context for the intermittent exploitation of lead would be when it was encountered and smelted experimentally in the course of copper mining. Here it is worth turning to a source much more local to Carghidown: the copper mine at Tonderghie, on the coast barely 600m south-east of the site. Wilson & Flett (1921, 128–9) recorded copper ores here, but Macleod (1986, 225) and Davidson (1795, 284) noted both copper and lead, and the latter is confirmed by local information: John Scouler of Tonderghie recalls that his father, the local minister, said the mine was reopened for lead during the Great War. This is highly suggestive, and the Carghidown beads are best seen as the results of local experimentation with the available mineral resources. There are indeed strong hints of early exploitation at Tonderghie, with tantalizing references to ingots (Davidson 1795, 285–6, 288); indeed a plano-convex bronze ingot is



ILLUS 20 $^{206}\text{Pb}/^{204}\text{Pb}$ vs $^{207}\text{Pb}/^{204}\text{Pb}$ plot of the data obtained for the control samples and Carghidown SF 3921/19 beads plotted as the average $\pm 2\sigma$ error for each sample



ILLUS 21 $^{207}\text{Pb}/^{206}\text{Pb}$ vs $^{208}\text{Pb}/^{206}\text{Pb}$ plot of the data obtained for the control samples and Carghidown SF 3921/19 beads plotted as the average $\pm 2\sigma$ error for each sample

TABLE 1

Lead objects and objects in the Iron Age. Unstratified and antiquarian finds from known Iron Age sites are included, except where clearly later (e.g. Dun Bharabhat, Lewis, where the small lead weight (Harding & Dixon 2000, 29) is from a post-occupation context and may well be a relatively recent fishing weight). A lead weight from the broch of Cinn Trola, Sutherland appears to be associated with a later burial (Joass 1890, 100). Codes in the form NMS xxx are registration numbers in the collections of the National Museums of Scotland.

<i>Site</i>	<i>County</i>	<i>No of objects</i>	<i>Object range</i>	<i>Date</i>	<i>Reference</i>
W Grange of Conan	Angus	2	Weights/whorls	RIA	Jervise 1862, 497; NMS HD 44–
Carlungie I	Angus	10	Rod with fine perforated ends; strip fragments with turned ends, perhaps mounts	RIA	Wainwright 1963, 141, pl XXXV; NMS HD 1754–
Dalladies	Angus	1	Long rod with tapered ends	RIA	Watkins 1980, 157
Hurly Hawkin	Angus	3	Cup-shaped weight or mount; weight; mount?	RIA?	Henshall 1982, 231; NMS HHA 49–1
Laws, Monifieth	Angus	2	Cup-shaped weight or mount; melted waste	PRIA (well-stratified)	Neish 1860, 445; 1864; NMS GN 51
W Mains of Ethie	Angus	1	Sheet fragment	RIA	Wilson 1980, 121, no 23; NMS HH 931
Dun Mor Vaul, Tiree	Argyll		Weight / whorl	Phase 3 – RIA?	MacKie 1974, 132, fig 16 no 297
Lochlee	Ayr	1	‘Round knob’	IA?	Munro 1882, 133
Lochspouts	Ayr	1	Bead or weight	RIA/EH	Munro 1882, 312; NMS HW 24
Traprain Law	E Lothian	39	Disc weights; whorls; ?beads; coiled strips; folded sheets ingots	Mostly RIA	Full details held in NMS
Dun Beag, Skye	Inverness	1	Folded sheet	IA? (also post-Roman finds from site)	Callander 1921, 125; NMS GA 1120
Cairngryfe	Lanarks	1	Domed container or mount	IA? (casual find)	Childe 1941, 217, pl LII; NMS HH 467
Hyndford	Lanarks	3	Weight or whorl; bar ingot; ‘large mass ... showing deep cuts’ (not in NMS)	RIA	Munro 1899, 383; NMS HTA 100–

TABLE 1 (*cont*)

Lead objects and objects in the Iron Age. Unstratified and antiquarian finds from known Iron Age sites are included, except where clearly later (e.g. Dun Bharabhat, Lewis, where the small lead weight (Harding & Dixon 2000, 29) is from a post-occupation context and may well be a relatively recent fishing weight). A lead weight from the broch of Cinn Trola, Sutherland appears to be associated with a later burial (Joass 1890, 100). Codes in the form NMS xxx are registration numbers in the collections of the National Museums of Scotland.

<i>Site</i>	<i>County</i>	<i>No of objects</i>	<i>Object range</i>	<i>Date</i>	<i>Reference</i>
Covesea	Moray	3	Whorls/weight (3 reported; only 1 in NMS)	RIA	Benton 1931, 201; NMS HM 183
Howe	Orkney		Stud	5th-3rd century BC (phase 4/5)	Ballin Smith 1994, 216-17
Edgerston	Roxburgh	2	Pattern for casting bronze openwork mounts; rod	IA / RIA?	HH 818-19
Fairy Knowe	Stirling	27	Weights, bars, sheet fragments, nodular waste, strip	RIA	Hunter 1998
Leckie	Stirling	?	Whorls, weights, lamps, ingots, lumps	RIA	MacKie 1982, 71
Carghidown	Wigtown	3	Beads	LPRIA	This paper
Dowalton	Wigtown	1	Weight	IA?	NMS HU 66

Abbreviations: L/P/R/IA, Late/Pre-/Roman/Iron Age; EH, Early Historic

known from Carleton, some 5km to the north-west (Curle 1932, 374; Whittick & Smythe 1937), the proximity suggesting it could be an alloyed product from these mines. It is generally (and plausibly) seen as Romano-British, although there is also Iron Age evidence for plano-convex ingots, notably from Edin's Hall in Berwickshire (Hunter 1999, 339-40).

None of this is conclusive, but it serves to create a web of potential contexts for the Carghidown beads. Intermittent early lead use is attested elsewhere in Scotland, while the exploitation of copper provides one avenue for the smelting of lead as a sideline or experiment; and the site sits in an area with evidence for mining. The beads are best seen as the result of experimentation with an unfamiliar and unusual but locally available material in the course of early mining and smelting activity at Tonderghie. Incipient

use of a new metal often involved ornaments, even if the material's properties were better suited for other functions; this finds parallels in the earliest lead yet attested in Britain, again with an ornamental function, in the Early Bronze Age (Hunter & Davis 1994).

The final issue to consider is their deposition. They may of course represent casual loss, the breaking of a necklace while labouring in laying the clay. However, a number of factors raise questions over this, especially the location outside the entrance (a common spot for votive offerings), and the apparently deliberate blocking of the perforation on one of the beads, making loss in use unlikely. This suggests the possibility of other motives, notably that they may represent a deliberate deposit. In this interpretation, the location would be a deliberate reference to the earlier

building, with its deposition in the clay layer both a closure offering for the old phase and a foundation offering for the new one, while the blocking of one perforation of a bead could represent the deliberate disabling of the beads. Similar evidence of foundation or closure deposits, often involving personal ornaments, can be noted elsewhere: for instance, the Roman brooch from the upper fill of the terminal of a ring gully at Carronbridge, Dumfriesshire (Johnston 1994, 250); the penannular brooch arguably built into the enclosure bank at Boonies, Dumfriesshire (Jobey 1974, 136–7); and the canal coal bangle beside the causeway to the Barhapple crannog, Wigtownshire (Wilson 1882). The enigmatic Carghidown beads, as personal items and unusual objects, would be highly appropriate offerings in such a ceremony.

In summary, the Carghidown beads represent an important piece in the jigsaw of early metallurgy in Scotland. They are rare evidence of pre-Roman lead use, and indicate Late Iron Age exploitation of the Galloway metal ores and experimentation with the resources encountered.

COARSE STONE

Rob Engl

The excavation of Carghidown promontory fort identified a total of ten coarse stone artefacts. The artefacts were grouped according to morphology, use-wear and probable function. A detailed description of each artefact is given in the category sections below.

RAW MATERIALS

The site is situated within till deposits derived from a solid geology of Lower Palaeozoic greywackes and shales (Brown et al 1982). All the artefacts, comprising a saddle-quern, a polisher, a burnisher, a cut-marked stone, a worked stone, two hammerstones and three manuports, appear to be made of locally derived materials. The saddle-quern (SF 4225.13) is probably derived from one of the numerous granite intrusions found in Galloway and may have occurred as a glacial erratic.

CATALOGUE OF COARSE STONES

Saddle-quern SF 4225.13 (380mm × 300mm × 110mm lower end, 160mm high end) Context 2014 (post-hole fill within ring-groove; illus 11 & 16). This artefact was roughly fashioned on a large split boulder of granite schist (illus 22). The

saddle-quern is roughly oval in shape with a flat base which would provide stability during use. The saddle-quern has a slightly narrowed raised face toward one end which flares out toward the other end. The working face of the artefact is slightly concave and has evidence of pitting in the central portion. This would have been repeatedly applied through the use of a hammerstone in order to aid the probable grinding of grain. A small band of smoothed wear caused by grinding is noticeable around the edge of the working face creating a slight lip. The artefact is at the smaller end of the size range of stationary saddle-querns (Engl forthcoming).

Cobble tools

Hammerstone SF 4225.12 (158mm × 78mm × 32mm). Context 2004 (earth and rubble bank of ring-groove). This artefact is made on an oval water-worn cobble of greywacke. Impact scars from heavy percussion are visible along the perimeter of a single end.

Hammerstone SF 4225.03 (185mm × 43mm × 19mm). Context 2004 (earth and rubble bank of ring-groove). Made on an elongated water-worn oval cobble of compact grey slate. This artefact has heavy use-wear scars from use as a percussion tool.

Burnisher SF 4225.02 (118mm × 38mm × 17mm). Context 2004 (earth and rubble bank of ring-groove). An elongated cobble of water-worn greywacke with patches of smoothed wear on both faces.

Polisher SF 4225.11 (96mm × 11mm × 7mm). Context 2004 (earth and rubble bank of ring-groove). Elongated plano-convex shaped fragment of compact slate. This artefact has a small crescent-shaped area of wear located on the ventral face of the stone at one end. The wear is smooth and measures approximately 22mm × 6mm. The wear is consistent with use as a polishing or burnishing implement and may have been used in the preparation of ceramics or leather.

Manuports

SF 4225.06 (104mm × 97mm × 8mm). Context 2009 (Stone paving at entrance to ring-groove). A circular water-worn cobble of greywacke with no apparent traces of wear.

SF 4225.10 (53mm×32mm×23mm). Context 2004 (earth and rubble bank of ring-groove). Small water-worn, oval cobble of quartz.

SF 4225.01 (120mm×63mm×17mm). Context 2004 (earth and rubble bank of ring-groove). Ovoid cobble of water-worn greywacke.

Though not worked, these items must have been brought onto the site by human agency.

Worked stone SF 4225.04 (152mm×24mm×18mm). Context 1002 (leached subsoil fill of ditch). Rectangular fragment of angular greywacke. The artefact is square in section with one end tapering to a chisel like point 25mm in width. It is possible that this artefact was used to work stone or wood. The cut marks on SF 4225.14 approximately fit the dimensions of the chisel point.

Cut-marked stone SF 4225.14 (240mm×240mm×52mm). Context 2004 (earth and rubble bank of ring-groove). Triangular slab of greywacke with three visible cut marks on one face. These marks have regular dimensions and are 25mm in length. They appear fairly shallow and there is little sign of crushing to the edges. All three marks appear to have been made by the same implement and have the same dimensions as the possible stone chisel SF 4225.04. The marks probably represent attempts at fashioning stonework for building material.

DISCUSSION

With one exception, all of the artefacts were associated with the ring-groove structure. Seven of these were recovered from the curvilinear earth and rubble bank; while a circular water-worn cobble (SF 4225.06) was retrieved from the entrance to the ring-groove, and the saddle-quern (SF 4225.13) was found as a packing stone within a post-hole in the south-west quadrant. The chisel (SF 4225.04) was recovered from the leached sub-soil covering the rampart and ditch (1002).

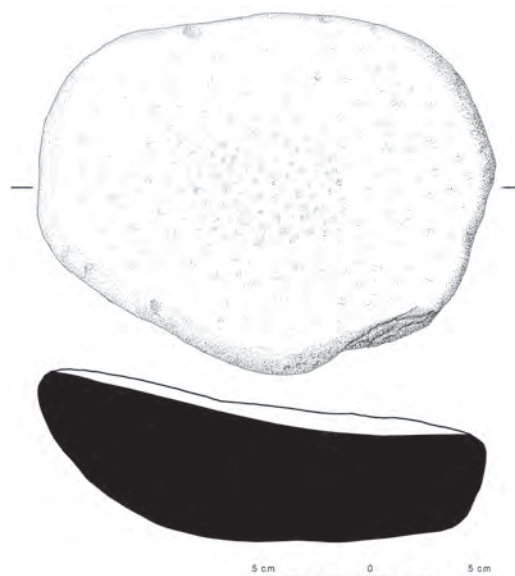
The coarse stone assemblage recovered from Carghidown is limited both in number and range of artefact types. A general later prehistoric date is assumed based on artefact typology and deposition.

The presence of objects such as the saddle-quern and burnisher suggest that tasks related to domestic settlement were carried out during the occupation of the ring-groove structure. The other artefacts are common utilitarian components of many prehistoric assemblages and were probably utilized in a wide

range of tasks such as the dressing of building materials and the possible shaping of saddle-querns (Close-Brooks 1986, 175).

Unfortunately, when attempting a wider discussion of coarse stone assemblages of this type within the south-west of Scotland, one finds that it is very poorly served in terms of well recorded assemblages of this period. Excavations at the Late Iron Age sites of Rispaig Camp, Whithorn (Haggarty & Haggarty 1983) and Hayknowes Farm, Annan (Gregory 2001) produced an even more limited number and range of such artefacts.

However, the coarse stone recovered from Carghidown is fairly consistent with many other later prehistoric assemblages derived from sites with evidence for roundhouse settlement throughout Scotland. The distribution of the majority of coarse stone artefacts within the ring-groove structure at Carghidown suggests a regular if not a necessarily deliberate pattern of artefact disposal being practised on site. Hill (1995) has suggested that the deliberate and structured disposal of Iron Age artefacts forms part of a wider set of beliefs. There are many examples within the wider Scottish archaeological record for the probable deliberate deposition of coarse stone tools within roundhouse deposits, for example, the saddle-querns set within pits and ditches at Sollas (Campbell 1991) and Kintore (Engl forthcoming).



ILLUS 22 Saddle-quern

Whilst it is tempting to see a special significance and ritual element to this repeated pattern of deposition, one should also bear in mind the utilitarian nature of these artefacts and the possibility of commonplace opportunistic re-use or disposal within contexts which would easily accommodate and make use of such items, such as post-holes and stone-built banks. It is just as probable that artefacts recovered from roundhouse banks such as at Carghidown represent an 'unconscious' treatment in which these artefacts were casually added to the general make up of the structure when finished with. Given the regionally diverse nature of the British Iron Age, more excavations in this area of Scotland will be required to determine any local patterns of distribution and deposition.

MISCELLANEOUS MODERN FINDS

Ronan Toolis

A number of artefacts, dating to no earlier than the 19th century, were found in the topsoil and leached subsoil layers that overlay the archaeological remains at Carghidown. These included glass shards, white china sherds, a copper alloy button, a modern bullet case and several iron nails distributed across the site, including a number of nails overlying the ditch that gave a notably strong signal during the geophysics survey (see above).

Given the apparent lack of recent occupation or activity at Carghidown, particularly the absence of ploughing within the site, the considerable number of modern artefacts within the topsoil was initially rather surprising. While it is probable that most of these artefacts are chance losses from agricultural activities or perhaps the result of manure spreading in the adjacent field, it may be that some of the glass and china fragments found within the interior of the site were dropped by picnickers that may have frequented the spot, given the obvious local knowledge of this diminutive site (Davidson 1795, 287; McIlwraith 1877, 62; McKerlie 1906, 417), and the sheltered disposition of the southern ring-groove hollow recognized during the excavation.

CHARCOAL

Alan Duffy

Charcoal samples from seven soil contexts were analysed, all of which were associated with the ring-groove (Table 2). Four species were present, hazel (*Corylus avellana*), ash (*Fraxinus excelsior*), oak

(*Quercus* sp) and heather (*Calluna vulgare*), of which hazel (*Cor. avellana*) was predominant, representing 68.5% of the assemblage. The material showed little sign of post-depositional disturbance.

Charcoal, deriving from short-lived material, was selected for radiocarbon AMS dating of single entities from three contexts: the earth and rubble bank surrounding the ring-groove (context 2004/2007), and the occupation deposit (2008) and post-hole fill (2010) from the last phase of the ring-groove. These features, representing early and late occupation phases of Carghidown, were prioritized for dating. As Table 3 illustrates, the radiocarbon dates place the occupation of the ring-groove firmly within the pre-Roman Iron Age.

DISCUSSION

The assemblage was too small to allow comment on wood use within the site. It is possible that the hazel roundwood represents the remains of hurdles, used as screens in the roundhouse, but equally it could be fuel debris, as could all the other species found.

SOIL CHEMISTRY

Robin Inglis

The characterization and comparison of the different sediments within a site can allow some degree of interpretation on their depositional history.

All sampled contexts were subjected to four analyses, using soil in a field moist condition. pH was determined in a 1:2.5 soil to distilled water mixture. Loss on ignition (LOI) used c 10g oven-dry soil ignited to 400°C for four hours. Determination of phosphate used a spot test for easily available phosphate (Hamond 1983). Calcium carbonate content was assessed semi-quantitatively using a simple field test and the samples assigned to the classes based on Hodgson (1976, 57).

The samples retrieved from Carghidown had unfortunately very homogenous chemical properties that make anthropogenic trends difficult to define. The easily available phosphate content was low and the calcium carbonate content was zero in all of the samples tested. The pH of the samples examined was mildly acidic to neutral.

It was the organic content, produced through LOI, which produced the only set of results worth comparing. The spread of LOI results showed quite drastic and localized variation, mainly between the low organic ditch and rampart fills and the high

TABLE 2
Charcoal identified at Carghidown

Context	Feature	Species	No. of IDs	Comments
2002	Leached subsoil over ring-groove (Phase 5)	<i>Corylus avellana</i> <i>Quercus</i> sp	3 4	Small angular fragments, 50% roundwood (<i>Corylus</i>)
2004	Earth and rubble bank around ring-groove (Phase 1)	<i>Corylus avellana</i> <i>Calluna</i>	3 3	Small angular fragments. 30% roundwood (<i>Corylus</i>)
2005	Floor foundation base of ring-groove (Phase 2)	<i>Corylus avellana</i> <i>Fraxinus excelsior</i>	3	Small angular fragments
2006	Fill of ring-groove (Phase 3)	<i>Fraxinus excelsior</i> <i>Corylus avellana</i>	2 2	Small angular fragments
2007	Earth and rubble bank around ring-groove (Phase 1)	<i>Fraxinus excelsior</i>	1	Very small angular fragments Very small to small angular fragments. 50% small roundwood (<i>Corylus</i>)
2008	Ring-groove occupation deposit (Phase 4)	<i>Fraxinus excelsior</i> <i>Corylus avellana</i>	2 8	
2010	Ring-groove post-hole fill (Phase 4)	<i>Corylus avellana</i>	3	Very small angular fragments
2035	Fill of pit at centre of ring-groove (Phase 2)	<i>Calluna</i> <i>Corylus avellana</i>	1 4	Very small angular fragments

organic deposits within the ring-groove deposits. Overall this ranged from 1.5% (from context 1013) to 19.2% (from context 2001 2C), with an average of 6.21%. From the combined phases of works there were 39 samples which fell into the non-humose (0–7 %) category and 21 samples with a humose (7–25%) classification. This high ratio of humose to non-humose indicates a good preservation environment for organic deposits and therefore may indicate a true and representative set of organic content results.

DISCUSSION

The majority of the samples were derived from the ring-groove, with others coming from the base of the possible northern roundhouse and the rampart area.

The material pertaining to the rampart showed no chemical anomalies; with non-humose organic content and mildly acidic pH. The lack of organic material

found within the ditch deposits, combined with any other chemical evidence, may suggest that the ditch was either not open long enough for a primary silting/infilling event to take place, or that it was consistently cleaned out before eventually being backfilled. The poor environment for preservation of phosphate and calcium carbonate may allude to poor preservation conditions rather than a lack of initial material, but given the organic preservation elsewhere this may not be the case.

The results from the base of the possible roundhouse at the north part of the interior indicated a high organic content and low pH. The high LOI results came from the dumped or overlying material (as described by the excavator), as would be expected from the inclusion of in-washed or active organic material, and the low pH was derived from the increased humic acid produced by this.

While more abundant samples were taken from the ring-groove, detailed conclusions are difficult to substantiate due to the homogenous nature of the results. Calcium carbonate was zero from every sample, which may be due to the consistently mildly acidic nature of the sediments. The negligible pH was the result of the natural acidity of the underlying 'C' horizon and solid geology, from which the fill sediments were derived. The phosphate content of the samples was also zero. The negligible phosphate content results from within the ring-groove may not be the result of a lack of phosphate-producing activities on site (burning, animal husbandry, rubbish dumping), but probably the result of the lack of a suitable phosphate-preserving environment within this part of the site. This may be due in no small part to the location of the ring-groove, in a hollow next to a cliff face, which may have allowed excessive leaching of water from the surrounding landscape.

However, the LOI results from the ring-groove do allow some interpretation through the few anomalies which occurred. Of the deposits which gave a humose level of organic content, contexts 001 and 2001 were

topsoil. Contexts 006 and 008 comprised a rubble/post abandonment deposit immediately under the topsoil, which if a collapse layer could have included organic material trapped between the stones. The only other sample that did not come from the possible occupation deposit (context 2008) within the ring-groove was the fill (context 2035) of the central pit (context 2036) within the ring-groove. This pit also included some fire-cracked stones, which combined with its location may indicate that this was a central hearth/cooking pit, the organic content being the remainder of fuel and/or cooking debris. The sample, however, did not carry any phosphate residue but, as mentioned above, this could be due to the leaching of phosphates through the soil profile.

A number of special samples (SS8-SS20) were taken from a surveyed grid across the ring-groove including, in particular, occupation Deposit 2008, allowing a spatial comparison of the occupation layer of the structure (illus 23). Of those special samples, numbers 8, 9, 10 and 13 were humose. The distribution of these samples is significant, as three of them (nos 8, 9, and 10) were located within the central

TABLE 3
Radiocarbon dates from Carghidown

Lab code	Context	Feature	Species (charcoal)	Years BP	$\delta^{13}\text{C}$ (‰)	Calibrated 1 sigma	Calibrated 2 sigma
SUERC-7294	2010	Ring-groove post-hole fill (Phase 4)	<i>Corylus avellana</i>	2090 ± 35	-26.6‰	170–50 BC	210 BC–AD 0
SUERC-7295	2008	Ring-groove occupation deposit (Phase 4)	<i>Corylus avellana</i>	2145 ± 40	-25.8‰	350–100 BC	360–50 BC
SUERC-7296	2004	Earth and rubble bank around ring-groove (Phase 1)	<i>Corylus avellana</i>	2030 ± 35	-26.8‰	90 BC–AD 30	170 BC–AD 60
SUERC-7300	2004	Earth and rubble bank around ring-groove (Phase 1)	<i>Corylus avellana</i>	2125 ± 35	-26.6‰	210–90 BC	350–40 BC
SUERC-7301	2007	Earth and rubble bank around ring-groove (Phase 1)	<i>Fraxinus excelsior</i>	2035 ± 35	-24.9‰	100 BC–AD 20	170 BC–AD 60

zone, adjacent to the area where the central hearth/cooking pit (context 2036) had been present during an earlier phase of occupation. This suggests that this area may have continued to be used for organic material preparation. Alternatively, there may have been an internal division of organic material located along the line between SS10 and SS9.

SOIL MICROMORPHOLOGY

Lynne Fouracre

Kubiena samples were taken from the south-west facing baulk section of the ring-groove (contexts 2004 & 2011; illus 8) and the north-west-facing section of the primary and secondary fills within the ditch (contexts 1010 & 1011; illus 14). These samples were taken because the sedimentary and depositional history of these archaeological sediments could not be determined through field observations and it was hoped that micromorphological analysis could help. Pedofeatures typical of dumped sediments include coarse simple packing structures, defined boundaries between units and minimal faunal mixing, although it should be noted that these features can also be produced by other processes. In addition, it is possible to compare the observed pedofeatures to those preserved in-ditch fills in the experimental earthwork project at Overton Down as these are useful analogues for stages of ditch filling under natural conditions (Macphail & Cruise 1996).

The samples were prepared for analysis using the methods of Murphy (1986) and analysed using the descriptive terminology of Bullock et al (1985). The sample was prepared at the University of Stirling in the Department of Environmental Sciences. Detailed descriptions of each thin section are provided in the archive report.

RESULTS FROM THE RING-GROOVE

The thin section from the south-west-facing baulk section of the ring-groove (illus 8) consisted of two main units, Unit 1 comprising the sediment of the earth and rubble bank around the ring-groove (context 2004), and Unit 2 comprising the floor foundation base of the Phase 3 ring-groove occupation (context 2011).

The sediment comprised poorly sorted silt with a porphyritic and gelfuric packing structure. The porosity was locally variable and up to 50% with randomly oriented plane voids. The fine fraction was dark reddish brown in plane polarized light (PPL) with

an undifferentiated birefringence fabric and consisted of granules and aggregated blocky peds. The high organic content of context 2004, the earth and rubble bank around the ring-groove, was responsible for the domination of the brown, dark brown, dark reddish brown and black matrix colours and for its isotropic nature in cross polarized light.

The coarse mineral component accounted approximately 35% of Unit 1 (context 2004) and was dominated by quartz with occasional feldspar. Unit 2 (context 2011) had a higher coarse mineral component of approximately 50%.

Exotic components existing in the sample were represented primarily by plant remains, both charred and uncharred, accounting for approximately 10% of the total soil sample. The remainder of the organic constituent was represented by organic-rich clasts, dark brown cellular organic fragments, charcoal and single-celled structures. Some of the charcoal fragments were quite large and survived up to 2mm in diameter. Several partially decomposed linear plant fragments up to 600µm in length were present, yellow in PPL. Also present were several amorphous masses of bright orange organic material up to 2mm. Occasional grey siliceous material was present, although it was not possible to identify species. There were also small charcoal fragments within the general matrix.

A number of the pseudomorphic voids contained well-rounded organic clasts that possibly represent biological excrement. In addition, several of the voids were stained with a thin orange deposit.

The boundary between Unit 1 and Unit 2 was diffuse and was distinguished by a higher coarse to fine ratio and a denser packing structure in Unit 2.

The basic composition of the fine fraction was similar to the upper soil but with some variation in the relative abundance of components. The number of voids decreased lower in the profile. The lower organic content and higher coarse mineral content give Unit 2 a yellowish brown colour in PPL.

RESULTS FROM THE DITCH

This thin section consisted of three main units: Unit 1 comprising the secondary ditch fill with rock inclusions (context 1010), Unit 2 comprising a lens of silty clay ditch fill (context 1010) and Unit 3 comprising primary ditch fill (context 1011).

The sediment was poorly sorted silty sand with a coarse simple packing structure. The porosity was up to 20% with planar and spongy voids and vughs. The fine fraction was orangey brown in PPL with a



ILLUS 23 Spatial distribution of soil samples

crystallitic birefringence fabric but low birefringence colours. The coarse component accounted for approximately 40% of Unit 1 and was dominated by feldspars and greywacke. There were several large greywacke rock fragments up to 11mm in diameter randomly oriented. Within the fine fraction were lenses of different coloured material although they appeared to be both randomly distributed and oriented.

Exotic components existing in Unit 1 were represented primarily by charcoal fragments, which contributed to approximately 10% of this unit. The

remainder of the organic component was represented by dark orangey brown cellular and fibrous organic components. There were zones of both charred and uncharred amorphous organic matter.

There were also a number of small charcoal fragments within the general matrix. The densest concentration of charcoal was at the top left of the slide up to 300µm.

The boundary between Units 1 and 2 was clearly defined by a thin organic-rich orange layer. Unit 2 consisted of a mineral-rich yellowish grey

silty clay with low porosity (<2%) and a crystalline birefringence fabric. The coarse component comprised approximately 35% of the unit. Unit 3 was similar to Unit 1 but contained fewer large rock fragments and had a lower porosity. There was a preferred orientation of some of the coarse sand sized mineral grains and rock fragments towards the vertical/near vertical.

DISCUSSION

The ring-groove

It was hypothesized that context 2004 represented the rapidly collapsed sediments of the earth and rubble bank surrounding the ring-groove and the sample under discussion was taken to verify the nature of this soil and, if possible, determine its rate of accumulation.

Micromorphological evidence for processes of sediment deposition may be obtained from fabric and structural properties in thin sections which describe the relative distribution and organization of the sediment components. In this instance a moderate level of biological activity was apparent as the deposition of the sediment had partially reworked the original microstructure of the sample. Preservation of organic plant material was relatively high and a number of local variations in colour and texture indicated that the soil had not been completely reworked.

All inclusions in the sample were randomly oriented and there was no indication of layering or gradual sediment build up. There were no features within this deposit that would suggest it was constructed during more than one episode. As the boundaries between the two units were diffuse, it is not possible to comment on the rate of accumulation of this deposit.

The ditch

The primary and secondary ditch deposits were very similar to the composition of the dump rampart, both being moderately sorted mid greyish brown silty sand with frequent inclusions of small angular stones and as such probably derived from slippage of rampart material into the ditch.

A sharp, smooth boundary between two anthropogenic units can indicate a marked change in human activity (Courty et al 1989). Several lines of evidence suggest that Unit 3 (context 1010) did not gradually accumulate in the ditch through the natural process of silting-up. The absence of clasts indicates that the unit was not subject to faunal mixing following deposition and as such may have been

rapidly redeposited. The relatively clean nature of context 1010 and the sharp boundary between it and context 1011, the primary ditch fill, may indicate that context 1010 was dumped. Additionally, the deposit contrasts with fill sequences observed elsewhere such as Overton (Cruise & Macphail 1996) and Easton Down (Macphail 1993) where banded fills (Overton) and homogenous fills (Easton Down) suggest a natural infilling over a lengthy period of time.

Whilst it is not possible to surmise exactly how long it took for the sediment to accumulate in the ditch, a number of inferences can be made. The primary fill appears to have been laid down relatively rapidly, although a degree of sorting suggests that the heavier material may have been deposited first. The silty clay deposit at the base of the secondary ditch fill suggests that fine clays and silts may have translocated down the profile following deposition, or that they were deposited during an initial phase of silting up or slippage following the deposition of the primary fill but before the accumulation of the majority of the secondary fill.

Experimental research at Overton Down (Bell et al 1996) has provided insight into the transition between primary and secondary fill in ditch deposits left to infill naturally. Primary ditch fill is typically dominated by material derived from weathering and collapse of recently exposed ditch sides, and the secondary fill originates from the surrounding catchment. The ditch sediment at Overton revealed banding ascribed to winter sedimentation of scree material and soil deposition in summer forming an annual banded sequence. Neolithic ditch fills from Easton Down revealed soil to have been homogenized over time and decalcified soil to have been integrated with the fine fabric of the ditch soil (Macphail 1993). In contrast to these examples, the ditch sediment from Carghidown is a deposit showing features of dumping and settling as demonstrated by the coarse simple packing porosity between large clasts which appears to have become loosely infilled with finer material as the dumped material has settled.

In conclusion, the field and micromorphological evidence appears consistent in indicating a rapidly deposited ditch fill. The microstructure of the sediment indicates that it was dumped rather than accumulated under natural agencies. It is not possible to establish a precise rate of deposition but the clear boundary between units and orientation of inclusions suggests that a rapid accumulation rate is probable.

DISCUSSION

Despite the limited resources that enabled only partial excavation of Carghidown, a sufficient amount of evidence has been recovered to provide some insight into the nature of the occupation of this promontory fort.

The primary feature within Carghidown was the ring-groove, the structural form of which is consistent with other ring-groove roundhouses investigated in Dumfries and Galloway. The packing stones within the Carghidown ring-groove indicated that its wall mainly comprised continuous upright planks c0.08m thick. Only at the north side of the entrance, within the third and fourth phases of occupation (illus 12 & 16), was the ring-groove defined by a series of individual posts perhaps 0.06–0.10m in diameter. A combination of plank walling and individual posts was also observed within the large roundhouse excavated at Rispaan Camp (Haggarty & Haggarty 1983, 34), while at Cruggleton Castle the roundhouse appeared to have first comprised individual posts, presumably holding in place a wattle wall, before being replaced with a continuous upright wall (Ewart 1985, 12). Upright timber planking was a common form for the outer walls of roundhouses in south-west Scotland, with examples from as early as the latter half of the second millennium BC (ie Ross Bay: Ronan & Higgins 2005, 55–7), the first millennium BC (ie Long Knowe: Mercer 1981, 50 & 67) and into the early first millennium AD (ie Boonies: Jobey 1975, 122–8).

Large posts defined the terminal of the two phases of the ring-groove wall north of the entrance at Carghidown. An opposite post was clearly demonstrable on the south terminal only within the third phase of occupation, but it is likely, given the irregular pattern of packing stones here, that this had disturbed the remains of earlier posts on the same place. The ring-groove entrance would appear to have been between 3.2m wide during the early phases of occupation and 2.6m wide during the later

phases of occupation. A similar pattern and width of entrance was observed at Rispaan Camp where large posts defined the terminals either side of both entrances into the large ring-groove roundhouse (Haggarty & Haggarty 1983, fig 10). Similarly, the ring-groove terminals at Boonies were commonly defined by large posts though here the entrances were narrower (Jobey 1975, 128). It might also be noted that as with Carghidown, no post-holes defining a porch were evident at Rispaan Camp or Boonies either, in contrast to other roundhouses in the region such as Hayknowes (Gregory 2001, 36) and Ross Bay (Ronan & Higgins 2005, 54).

Excavated ring-groove roundhouses in Dumfries and Galloway range from 4m in diameter such as Hut 10 at Long Knowe (Mercer 1981, 48) to 15m in diameter such as Building 4 at Carronbridge (Johnston 1994, 247). With a 9m diameter, the circular ring-groove at Carghidown falls close to the centre of this size range, in a cluster including Cruggleton Castle (Ewart 1985, 12), Ross Bay (Ronan & Higgins 2005, 54–5), Uppercleuch (Terry 1993, 60), Burnswark (Jobey 1978, 76), hut circles 7 and 9 at Long Knowe (Mercer 1981, 49), Woodend (Banks 2000, 230–5), Boonies (Jobey 1975, 127–9) and Moss Raploch (Condry & Ansell 1978, 105). However, the upstanding nature of the earth and rubble bank into which the Carghidown ring-groove had been cut, presumably to help anchor the outer wall, and the preservation of interior surfaces revealed that the actual floor surface was only c6.4m in diameter. This reflects in a way Moss Raploch (Condry & Ansell 1978, 105), where a thick stone wall defining an external diameter of c 8m enclosed an interior surface 5.5m in diameter. Given the plough truncated nature of many excavated roundhouses, the implication of the evidence from these two partially upstanding sites is that the actual surface of the living space within a ring-groove may be considerably less than that measured simply from the external diameter. Calculations of interior floor space from external diameter alone (eg Jobey 1975, 27–130), while useful for comparing probable

relative floor spaces between roundhouses, may not reflect the exact floor spaces available.

A post-ring, 6.1m in diameter, not entirely concentric with the ring-groove, was evident close to the interior edge of the ring-groove bank and was composed of at any one time at least four posts each between 0.12m and 0.20m in diameter, though it should be noted that not only the baulks, but the unexcavated north-western part of the roundhouse, may have masked further posts belonging to this post-ring (illus 10, 12 & 16). The ratio between the diameter of the ring-groove and this post-ring was 1:0.678, not significantly different from Hill's optimum ratio of 1:0.707 (Hill 1984, 81) and which adheres to a common pattern amongst roundhouses in Dumfries and Galloway (Condry & Ansell 1978, 106; Haggarty & Haggarty 1983, fig 10; Ronan & Higgins 2005, 54; Cook 2006) as elsewhere, of post-rings being quite close to the outer wall line (Hill 1984, 80).

Another post-ring, 3.8m in diameter, was evident around the central area of the ring-groove interior and comprised posts between 0.20m and 0.30m in diameter. Though only three posts of this post-ring were revealed at any one phase, the unexcavated baulks may have obscured further posts belonging to it. This inner post-ring is more unusual within Dumfries and Galloway, the only comparable example being the large roundhouse at Rispaan Camp, which possibly possessed a similar inner post-ring, unfortunately truncated by Barbour's earlier excavation trenches and modern field drains (Haggarty & Haggarty 1983, 35 & fig 10). However, sufficient numbers of roundhouses with three concentric structural rings are known elsewhere in Southern Scotland and Northern England (Reynolds 1982, 49–50) to allow for it at Carghidown.

Given their diameter, compared to the general width of the ring-groove wall, the posts of the two post-rings at Carghidown appear to have been load-bearing, necessary to support the ring-beams needed to exert an outward pressure against the roof (Reynolds 1982, 51). The greater

size of the post-holes of the inner post-ring would be consistent with the greater length of posts required to bear the weight of a ring-beam close to the apex of the roof. Following Hill (1984, 80), the outer post-ring perhaps was the primary load-bearing structure for the roof, although it may also have conceivably supported an upper floor as envisaged for outer post-rings at other roundhouses where three concentric structural rings are demonstrated (Reynolds 1982, 50–3). The continuous plank walling of the ring-groove outer wall was presumably sufficient merely to anchor the roof beam ends and withstand the elements.

At Carghidown the admittedly limited exposure of the underlying natural subsoil below the ring-groove indicated that the ground had been excavated down to subsoil prior to the formation of the earth and rubble bank, which probably derived from this same landscaping process, as envisaged at Broxmouth (Hill 1982, 173). A similar process of site clearance down to subsoil was observed at Woodend (Banks 2000, 248). Material had then been added to level the interior. This was also observed at Teroy Broch (Curle 1912, 186), Moss Raploch (Condry & Ansell 1978, 107) and the undated enclosed settlement at Chippermere a few miles to the north of Carghidown (Fiddes 1953, 153). This is also reminiscent of the scooped settlements in eastern Dumfriesshire (Jobey 1971, 87; Terry 1993, 53).

Although hazel, ash, oak and heather are potential constituent materials of the Carghidown ring-groove, the charcoal assemblage was too small (see Duffy above) and the contexts too insecure to differentiate between potential structural timber and fuel. However, given that oak and hazel were present within the Cruggleton ring-groove (Ewart 1985, 14) while oak, hazel and ash charcoal were also present within both ring-grooves at Rispaan Camp, including part of an oak plank (Haggarty & Haggarty 1983, 34–40), it seems nonetheless plausible that structural elements of the Carghidown ring-groove may have been composed of these materials.

The occurrence of comparably well preserved successive pebble and stone slab floors within the interior of the ring-groove at Carghidown is due more to factors of survival than any uncommonness of these as original features. As others have noted (Ronan & Higgins 2005, 67–8), paved floors are reasonably ubiquitous across a range of prehistoric, Early Historic and medieval structures within Dumfries and Galloway. A matching sequence of pebble and slab floors was apparent within at least one roundhouse at Burnswark (Jobey 1978, 78). Paving was also apparent at Teroy Broch (Curle 1912, 186) and within and outwith the roundhouses at Boonies (Jobey 1975, 127). At Long Knowe, successive layers of paving were evident within at least one structure (Mercer 1981, 46–4), while successive layers of paving were recorded at the entrance and immediate exterior of the Moss Raploch roundhouse (Condry & Ansell 1978, 106–8) and within Chippermore (Fiddes 1953, 154).

While the orientation of the entrance, facing south-east, adheres to a common pattern amongst Iron Age roundhouses, routinely interpreted as indicative of an underlying cosmology that dictated domestic life during the Iron Age (Fitzpatrick 1997, 77; Oswald 1997, 92–4; Giles & Parker Pearson 1999, 219–29) rather than simply serving to provide a modicum of light for household activities particularly at the beginning of each day, it is difficult to see that the entrance at Carghidown could have been orientated significantly differently given its location on a south-west-facing coastal promontory. It has also been observed at other sites too, such as Moel y Gaer (Guilbert 1975, 206), that ring-groove entrances face the settlement entranceway.

Close to the centre of the space defined by the post-rings was a large pit containing heat-fractured stone. Although this could not be definitively identified as a hearth, due to the absence of ash deposits within it or other evidence for burning in situ, it is nevertheless possible, given the soil chemistry results (Inglis above), that a hearth or oven was situated very close by. The soil chemistry results could be consistent

with the central zone of the ring-groove being the focus of activity involving food preparation in at least two phases of the ring-groove occupation. Alternatively, the soil chemistry results may indicate an internal division, separating the south-west part of the site from the south-east, though it should be noted that no corresponding stake-holes were encountered. However, it should be also observed that the only major occupation layer evident within the ring-groove, albeit during the very last phase, was within the south-west quadrant as was the distribution of stone tools. While the north-west quadrant was largely unexcavated, those south-eastern and north-eastern parts examined did not reveal any artefacts either. Furthermore, although the deposition of the stone artefacts within the ring-groove cannot be securely extricated from the last phase of occupation of the site, as it may conceivably owe more to the abandonment phases of the ring-groove than its occupation (LaMotta & Schiffer 1999, 20–5), the regular if not necessarily deliberate distribution of the majority of the artefacts (Engl above) suggests that this distribution was not random (illus 16). While by no means conclusive then, there may be evidence to consider at Carghidown a central zone and a possible south-west peripheral zone of activity within the ring-groove, indicative perhaps of radial divisions around an open central space. Though Moss Raploch is the only remotely comparable example within Dumfries and Galloway (Condry & Ansell 1978, 106–9), this is a common enough pattern of internal organization amongst many other better preserved roundhouses elsewhere in Scotland, such as Sollas Wheelhouse (Campbell 1991, 127), Scalloway Broch (Sharples 1998, 39) and perhaps Fairy Knowe, Buchlyvie (Main 1998, illus 43).

Carghidown was consistent with many other comparable sites in south-west Scotland in yielding very few artefacts (Banks 2002, 31). Nevertheless, those few artefacts do offer some tentative indications of the nature of the occupation. In general, the stone tools were

consistent with domestic activities, particularly the saddle-quern and burnisher, though it cannot be assumed that the saddle-quern necessarily connects the occupants with arable agriculture as saddle-querns were not solely used for grinding grain (Armit 1991, 192). However, given that the probable functions of the other stone tools are not out of place within a domestic context, there seems nothing remarkable about the stone tool assemblage in comparison with other excavated later prehistoric domestic sites within the region (Scott-Elliot 1964, 123–4; Scott-Elliot et al 1966, 78; Williams 1971, 113–16; Jobey 1975, 133–5; Jobey 1978, 94; Haggarty & Haggarty 1983, 34–6; Banks 2000, 262; Gregory 2001, 34) or elsewhere in Scotland (Engl above). The lack of further occupation evidence is probably not just the result of the excessive leaching of water from the surrounding landscape inferred by Inglis above. The lack of any significant depth of occupation layers within the ring-groove is likely due to the regular sweeping of the interior surfaces. Evidence elsewhere for the sweeping of rubbish from the interiors of roundhouses include the charcoal debris evident amongst the cobbled yard immediately outwith the Moss Raploch roundhouse (Condry & Ansell 1978, 111), the soil chemistry results from Upperclench (Terry 1993, 77) and Woodend (Duncan 2000, 257), and the similar lack of deep occupation layers at Burnswark (Jobey 1978, 78). Regular cleaning of the interior floors of roundhouses was also evident at Sollas and Cnip in the Western Isles (Armit 1996, 145) and Scalloway in Shetland (Sharples & Parker Pearson 1997, 258) and is implicit in sites further afield (Mytum 1989, 73–4). It is also possible that the absence of any midden within Carghidown was due to the disposal of waste as manure, recycling of materials such as metalwork (Hingley 1992, 37), the incorporation of some waste into the earth and rubble bank for the ring-groove, or simply that much of the rubbish was thrown over the cliff rather than allowed to accumulate. As others have noted (Terry 1993, 82), and which is evident especially from sites where better

preservation of organic finds is possible (Hunter 1994a, 53), the paucity of artefacts within most later prehistoric northern British sites may reflect cultural choices affecting material and deposition rather than material impoverishment (Haselgrove 1999, 255). Despite the relative paucity of artefacts from Iron Age settlements in Dumfries and Galloway, valuable metalwork from Rispaig Camp and Cruggleton for instance demonstrates the participation and status of their occupants within a complex social structure in the Machars (Hunter 1994a, 55). Such participation is also demonstrated at Carghidown by the three lead beads recovered from just outside the ring-groove. These beads are extremely rare and significant artefacts within a pre-Roman Iron Age native context. Using the lead isotope evidence and the proximity of known copper and lead sources, Hunter makes a compelling argument above for these artefacts being a result of experimentation in what was an unusual material extracted during the local mining of copper. While Hunter also makes a strong argument for the lead beads being a votive offering during the closure of one phase and the commencement of another phase of occupation at Carghidown, there was no evidence from their context during excavation for the deliberate deposition of these artefacts. Notwithstanding questions over the exact nature of their deposition, or indeed whether the occupants were themselves active in copper mining, the lead beads do place a person or persons participating in the distribution of copper mining products and therefore of some status at Carghidown precisely at the time when the site was developed into a more formally organized and enclosed settlement. Despite the rather meagre artefactual record from the excavation, this evidence demonstrates that Carghidown was a settlement occupied by people of significant status within the social network of the south Machars, at least during its later phases of occupation.

The exact period when Carghidown was occupied, however, is difficult to discern. Though the charcoal samples used for dating derived from

short-lived material, the range of radiocarbon dates, spanning 360 BC to AD 60 (Table 3), do not illuminate the stratigraphic sequence very well. While the deposition of the Phase 1 earth and rubble bank was clearly stratigraphically earlier than the later Phase 4 post-hole and occupation deposits, it was still probably open to the inclusion of charcoal fragments over the entire lifespan of the ring-groove. This may explain the skewed distribution of radiocarbon dates from the earth and rubble bank towards the latter end of the overall range of dates, reflecting perhaps that the most prevalent deposition of artefacts, such as the stone tools, along with charcoal within the earth and rubble bank, more likely derived from the final or abandonment phases of occupation (LaMotta & Schiffer 1999, 20–5). It might also be cautioned that the use of the saddle-quern as a packing stone in one of the post-holes during the very last phase of occupation, and the implication that it was utilized because it was to hand and therefore in recent use prior to deposition, cannot be used to narrow the date of occupation to the earlier part of the radiocarbon date distribution. Although the transition from saddle-querns to rotary querns for the processing of grain is estimated to date to around 200 BC, saddle-querns have a greater range of functions and must therefore be treated more cautiously in terms of chronological significance (Armit 1991, 192).

If the radiocarbon dates only indicate a wide range of time, during which at some point the occupation of Carghidown occurred, the question remains as to the duration of that occupation. The radiocarbon dates might appear to indicate an extremely long duration for the timber ring-groove structure, perhaps as much as 400 years, but it is unlikely given the organic nature of the ring-groove, and especially at such an exposed location, that the occupation of Carghidown spans this entire period. Dendrochronological examination of the lifespan of timber houses from wetland environments, such as Buiston crannog in Ayrshire, Clonfinlough in Offaly and Island MacHugh in Tyrone, demonstrates

that such structures were short-lived, occupied probably for no more than two or three generations (Barber & Crone 2001, 71–3). While the radiocarbon chronology for Phases III and IV at Buiston spanned 475 ‘radiocarbon years’, the tree-ring chronology demonstrated that the duration of the occupation in the roundhouses of these two phases lasted no more than 33 years (Barber & Crone 2001, 71). The individual houses at Buiston only lasted between five and 20 years, while the hearths and floors within each roundhouse underwent repair and replacement within two- to five-year cycles (Crone 2000, 160). Doubts as to what extent wetland environmental circumstances played in the short lifespan of such buildings (Halliday 1999, 61) are dispelled by evidence from waterlogged dryland sites, such as the roundhouses at Deerpark Farms, Antrim, which again indicate a short lifespan for prehistoric timber buildings (Barber & Crone 2001, 73–4). Corroborative evidence from Carghidown for a similarly brief duration is represented not only by the post-rings, which required partial repair, indicative of substantial and periodic repairs to the structure and roof. The replacement of the ring-groove floor on at least four occasions while the outer wall that enclosed it, and which was more exposed to the elements, only required partial replacement on its north side alludes to the same pattern of short-term periodic renewal of a roundhouse interior demonstrated at Buiston. That some of the posts belonging to the internal post-rings were replaced indicates substantial damage to the roof on more than one occasion that subsequently allowed structural damage to the ring-groove structure itself. This evidence may indicate that the short occupation of Carghidown was broken by brief periods of abandonment, which necessitated the need for repeated repairs to the roof, structure and floors of the ring-groove.

The form, dimensions, materials and date of the ring-groove structure at Carghidown are sufficiently consistent then with other ring-groove roundhouses in Dumfries and Galloway

and beyond to allow it to be considered a roundhouse. Furthermore, if the outer post-ring was unnecessary merely to support the roof (Reynolds 1982, 53; Rideout 1996, 260–1) but supported an upper floor, an outer plank wall rising to a level commensurate with *c* 2m high on its south side, and a roof pitched at 45°, as postulated for similar structures (Reynolds 1979, 33; 1982, 51; Haggarty & Haggarty 1983, 42), the posts belonging to the outer post-ring would be between *c* 1.8 and 2.8m high, while the posts belonging to the inner post-ring would be *c* 3.4m high. Although this might define an upper floor 10.75sq m in area, only a 4.15sq m area across its centre would have headroom of 1.8m. Whether this was sufficient for a living space is open to debate. That the post-rings are not concentric with either each other or the ring-groove is another factor to bear in mind when considering if the load-bearing structure was sufficient to support an upper floor. While a probable hearth or oven was apparent during one phase of occupation at Carghidown, the sparse evidence for any subsequent hearths or occupation debris is consistent with the occupation of the two-storey Atlantic roundhouse of Scalloway in Shetland, where the overwintering of animals on the ground floor and concurrent principal habitation of an upper floor was postulated (Sharples & Parker Pearson 1997, 259). At Scalloway it was further proposed that this seasonal pattern of occupation was followed by the clearing out of animal dung and refuse to allow the ground floor to be used for a variety of domestic activities (Sharples & Parker Pearson 1997, 259). Such a pattern of living might explain the lack of occupation debris or any permanent hearth on the successive floors at Carghidown.

The Carghidown ring-groove may therefore have been a roundhouse, probably one storey but conceivably two storeys in height. It was occupied intermittently and by persons of some status, within a short duration during the later half of the first millennium BC or perhaps the very start of the first millennium AD.

The form of the settlement at Carghidown appeared to comprise a principal domestic area defined by the roundhouse, complemented by an open yard. The clay surface, evident only during the later occupation phases, may have served to formalize the yard, which presumably was always an open space adjacent to earlier phases of the roundhouse. The base of another circular platform on the north edge of the open yard may have been intended to form the foundations of another, perhaps larger, roundhouse, as the landscaping of this secondary platform is reminiscent of the scooped platforms evident to the east (Jobey 1971, 87), as well as other settlements in Galloway (Curle 1912, 186; Fiddes 1953, 153; Condry & Ansell 1978, 107). The complete absence of any post-holes or other structural or occupational features within this platform, however, indicates that the establishment of a second roundhouse was halted at a very early stage of its construction.

It is apparent nevertheless that the interior of the settlement at Carghidown was distinguished between a roofed zone and an open zone, a layout common to many Iron Age settlements within the region, such as Boonies in East Dumfriesshire, where the internal layout was divided between a living area of successive roundhouses and an open yard (Jobey 1975, 138). This internal settlement layout was also evident at Uppercleuch (Terry 1993, 79) and Chippermere (Fiddes 1953, fig 1) and has been observed at several other promontory forts on the Galloway Coast (Toolis 2003, 64) as well as other Iron Age settlements further afield (Jobey 1983, 199). However, while the evidence from Uppercleuch, for instance, demonstrated that the open cobbled yard area of the settlement acted as animal holdings (Terry 1993, 79), no comparable evidence, in the form of high phosphate levels or demonstration of wear, was apparent at Carghidown. It is therefore not possible to speculate with any certainty what specific activities were practised within the open zone of the settlement.

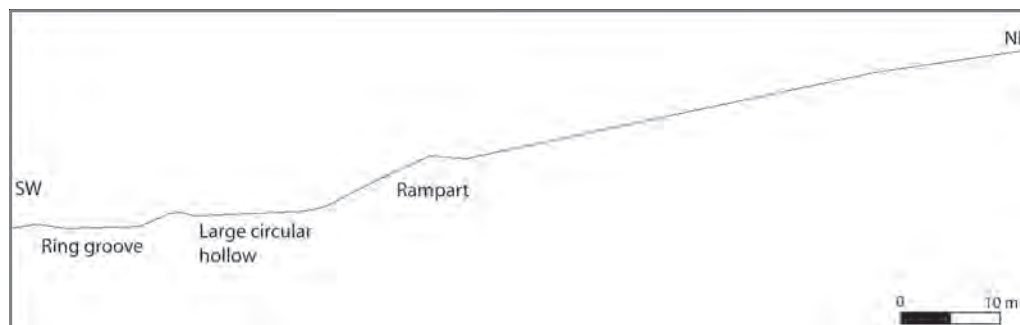
The construction of a rampart and ditch enclosing the open and roofed domestic zones of

the settlement at Carghidown probably followed shortly after the formalization of the open space within the settlement, as loose spoil from the ramparts evidently spilled down onto the freshly laid clay surface of the yard, necessitating a stone revetment along the inner face of the rampart to prevent further slippage. That this fairly modest slippage overlay the clay yard surface but was itself overlain by a thin clay surface laid over part of the secondary platform immediately west of the rampart, indicates the sequence of construction associated with the consolidation of the settlement. The clay yard was laid first, followed shortly by the rampart and ditch, and perhaps a gateway structure as indicated by the large post-hole within the entranceway to the site. This was then shortly followed by the last work to the secondary platform, the laying of a clay surface. It was probably around the same time that the last alterations, belonging to Phase 4, were made to the roundhouse, which also succeeded the laying of clay over the open yard of the settlement.

The form of the 3m wide, 1.5m deep ditch is closely similar in its profile and dimensions to the outer ditch at Rispaan Camp (Haggarty & Haggarty 1983, 29), the inner ditch at Doon Hill (Crone 1982, 86) and the ditch at McCulloch's Castle (Scott-Elliot 1964, fig 2). The form of the rampart can be surmised from inverting the secondary fill of the ditch, which was identical to the remains of the earth rampart still in situ. From this it is apparent that the 3m wide rampart was composed of an earth bank, probably around 1m high, and crowned by a stone wall, perhaps the best part of another metre high. The form of this rampart was probably very similar to that recorded at McCulloch's Castle (Scott-Elliot 1964, fig 2), in contrast to the stone-capped earth ramparts envisaged at Doon Hill (Crone 1982, 85), Camp Hill, Trohoughton (Simpson 1964, 127), Woodend (Banks 2000, 248), Upperclench (Terry 1993, 78) and Long Knowe (Mercer 1981, 58–9). While the bulk of the rampart presumably derived from the ditch upfill, given the large numbers of stones required, not only for the

rampart wall, but also for filling the hollows underneath the clay yard and the secondary platform, it is very likely that many of the stones present on site were gathered elsewhere. Along with the clay for the open yard and the materials for the alterations to the roundhouse, which must also have been brought from elsewhere, this demonstrates not only that substantial effort was required in formalizing this settlement but also that some degree of planning was carried out too. A comparable process has been envisaged not only for other native settlements in the region such as Woodend (Banks 2000, 248) but the Roman Fort at Glenlochar too (Richmond & St Joseph 1953, 3). The substantial resources spent in developing Carghidown into a more formally organized and enclosed settlement therefore complements the evidence, represented by the lead beads, for a person or persons of some status at the site during this process.

The duration of this final occupation phase of the site, however, was almost certainly very short. As outlined above, the construction of features that altogether formed the formal organization and enclosure of the settlement appeared to follow rapidly in succession. However, in comparison to ditch sections examined during earthwork experiments at Wareham (Evans & Limbrey 1974, 178) and Overton Down (Bell, Fowler & Hillson 1996, 234–5), the absence of much in the way of primary ditch fill at Carghidown demonstrates that the ditch was open for no more than a year or two before the rampart had entirely collapsed into the ditch. As the analysis of the soil micromorphology from the ditch fill demonstrates (Fouracre above), the deposition of this material took place in one event. This is corroborated by the lack of organic material found within the ditch deposits, which suggest that the ditch was not open long enough for much primary silting to take place (Inglis above). From the drystone masonry that sealed this ditch fill, it seems that the collapse of the earth rampart removed the entirety of the stone wall that crowned it. This evidence suggests an abrupt and complete collapse of the rampart



ILLUS 24 Topographic profile of Carghidown

rather than gradual disintegration. If the stone wall had gradually fallen into the ditch, or indeed if the earth rampart had been capped with stone rather than crowned with a stone wall, a more mixed deposition of stones would be apparent extending from the base of the rampart. The base of the stone face might still be expected to survive in situ at the interface between the rampart and the ditch, as the revetment was. Instead the entire wall face had collapsed into the ditch.

An abrupt closure to the occupation of Carghidown is also demonstrated elsewhere on the site. The final alterations to the roundhouse, which necessitated the breaking up of a large part of the slab floor to be reused as packing stones for a number of structural posts, was not accompanied by the laying of a new floor surface. Only a very thin layer of relatively charcoal-rich material was evident and, far from demonstrating any substantial build up of occupation debris, this may only have derived from the disturbance of the slab floor. The micromorphological analysis of that small part of the surrounding earth and rubble bank that had collapsed over part of the interior of the roundhouse did not indicate a gradual process (Fouracre above; illus 8) but there was no evidence for deliberate infilling as apparent on sites where planned abandonment is postulated (Nowakowski 2001, 141–5). Furthermore, there

was no evidence of occupation of the secondary platform and if this was intended to form the base of a second roundhouse, there was no evidence that the erection of any timber structure had begun. There was also no evidence, such as wear or secondary features, from the clay yard.

Because no floor surface was found in association with the last building phase within the roundhouse, it may be surmised that the refurbishment or repair of the roundhouse had been started but not finished. A platform for a second, larger roundhouse had been created but no further construction had followed. The clay yard had been laid but no evidence of use was apparent. Taken together with the evidence for the sudden dismantlement of the rampart enclosing the site, the occupation of Carghidown clearly underwent an abrupt and deliberate act of closure, during a new phase of construction and consolidation.

The nature of this act of closure and the implications this has for the function of the settlement itself remains to be examined, but further consideration must first be given to the topographic location of Carghidown to understand why a settlement was established here in the first place.

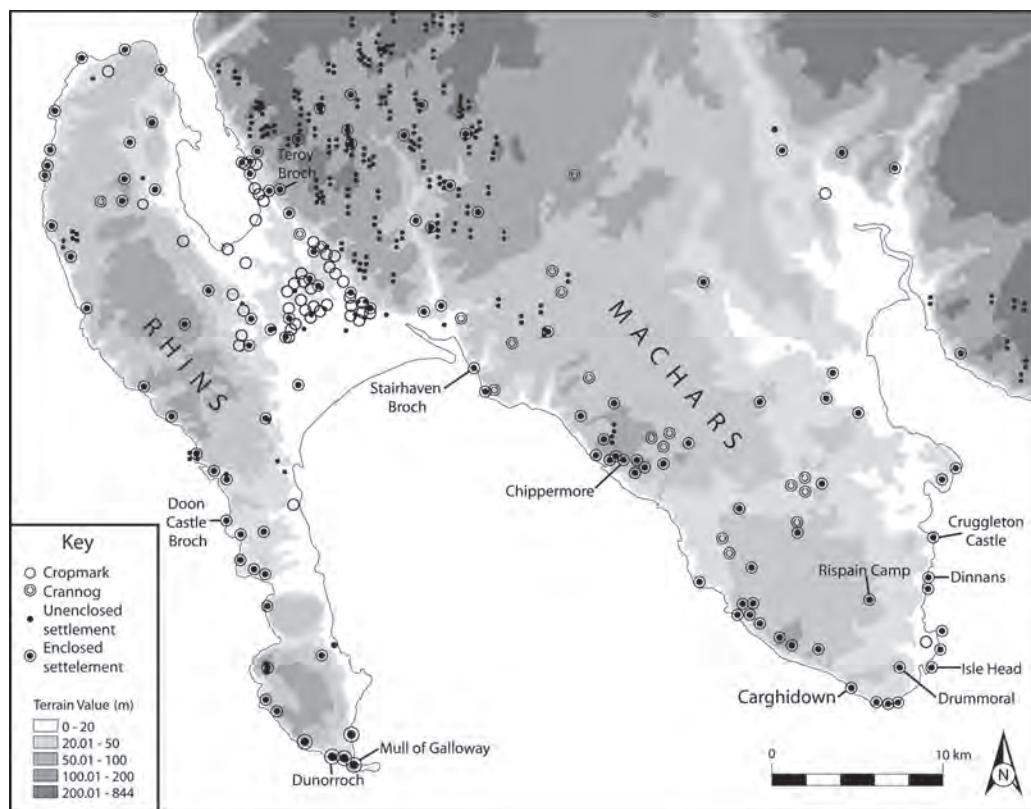
As the author has previously noted, Carghidown occupies an apparently indefensible location (Toolis 2003, 63). Like a few other later prehistoric settlements along the Galloway

Coast, such as Dinnans (Toolis 2003, 63), Dunorroch (Ralston 2006, 37) and the brochs at Stairhaven (Yates 1983, 95) and Doon Castle, Carghidown occupies a seemingly irrational locale. While its immediate hinterland forms a small pocket of good quality agricultural land on this part of the Machars coast, this ground drops considerably to meet the site (illus 2 & 24), which raises the question as to why a settlement was established here instead of a short distance landward. Carghidown is not visible from its hinterland until one is almost upon it, nor, contrary to earlier impressions by the author (Toolis 2003, 46), is it intervisible with any known contemporary site on the same coastline. It is not especially visible from the sea either, situated as it is on a small promontory on an incised fractured coastline. It has no direct access to the sea that might allow maritime activity other than fishing from the rocks nor does it occupy a location especially proximate to the copper mine that probably formed the likely source of the lead beads recovered from the site (Hunter above). However, that considerable effort and resources were repeatedly invested in occupying, re-occupying and latterly fortifying Carghidown suggests that its precarious location was no accident. That Carghidown is concealed by the lie of the land seems pertinent to the nature of its occupation.

Given this aspect of Carghidown, it is necessary to observe the wider landscape around the site. Carghidown lies on the south-west coast of the Machars, at the end of a ridge of broken high ground, on the opposite side of the peninsula to the low-lying and better quality agricultural land in the south-east part of the Machars (illus 25). The scattered distribution of prominent fortified settlements in this area, notably Rispain Camp, Drummoral and Isle Head reflects no more than that these are either of a sufficient scale to have withstood generations of ploughing or occupy undesirable locations for arable agriculture. The coastal distribution of the remaining known later prehistoric settlements in the South Machars (illus 25) is due more to the marginal nature of

these sites in the modern landscape, which has led to their precarious survival (Toolis 2003, 71–3) rather than an association with maritime activity, as none of the excavated promontory forts has yet yielded evidence for maritime-related activity and for only a few on the Galloway Coast is it conceivable that maritime activity played a reason in their location (Toolis 2003, 65–8). As others have surmised (Hunter 1994a, 35), the large blanks in the Iron Age settlement pattern within this part of the Machars are misleading, as this reflects more the nature of archaeological visibility than any true absence of settlement, especially as there are undoubtedly large numbers of plough-truncated sites under pasture in this part of south-west Scotland (Cowley & Brophy 2001, 49; Cowley 2002, 262). This is verified by aerial surveys of the low-lying flat arable and pasture lands of the East Rhins, which have yielded plenty of evidence for hitherto unknown cropmarks (illus 25), many of which appear to be later prehistoric settlements (Cowley 2000, 172–3; Cowley & Brophy 2001, 69). The South Machars has not yet received such intensive aerial surveys but, given the presence of at least one such comparable cropmark in this area (illus 25), and the greater capability in the South Machars for pre-modern arable agriculture than in the East Rhins (Donaldson 1816, 429–30, 435–6), it is highly likely that a similar pattern of as yet undiscovered plough-truncated remains exist here too. The implication therefore is that not only was there a much more intensive settlement pattern in the South Machars during the Iron Age than the distribution map of known settlements gives credit but that, contrary to the distribution map (illus 25), settlement during the Iron Age was concentrated more in the south-east part of the Machars than the south-west where Carghidown lies.

The nature of settlement in the South Machars contemporary to Carghidown is revealed by evidence from a number of sites. Prominent amongst these is Rispain Camp. While the radiocarbon dates derived from its excavation may have a questionably long



ILLUS 25 Later prehistoric settlement distribution in western Galloway

range, due to the selection of multiple entities including oak samples for radiocarbon dating (Haggarty & Haggarty 1983, 40), its occupation must nevertheless fall within a more compressed span between the mid first millennium BC and early first millennium AD. This rectilinear enclosed settlement, one of a growing number of 'improved farms' of the Iron Age discovered within prime agricultural land in south-west Scotland (Cowley 2000, 173; Cowley & Brophy 2001, 68–9), is very likely associated with the planned and large-scale intensification of agriculture evident across southern Scotland during the late first millennium BC (Tipping 1994, 31–3; 1997a, 20; 1997b, 245). Added to evidence such as the ards from Milton Loch crannog

(Guido 1974, 54) and Lochmaben (Fenton 1968, 150) and possibly the cord rig at Brighthouse Bay (Maynard 1994, 16), the recovery of bread wheat at Rispaan Camp (Haggarty & Haggarty 1983, 39–40), rarely found in native Iron Age contexts where hulled barley and emmer wheat predominate (Tipping 1997, 21), is significant evidence for advanced arable agriculture in this part of Scotland at this period (Dickson & Dickson 2000, 110). It is understandable then that the excavators preferred the rendering of the place name, 'chief of the cultivated country' (Haggarty & Haggarty 1983, 43), especially given the original meaning of the Machars as a 'low-lying fertile country' (Donaldson 1816, 423). Furthermore, as already noted above,

Rispain Camp has produced evidence of high status metalwork (Close-Brooks 1983, 47–8; Haggarty & Haggarty 1983, 45–6 & 49). Given this evidence, indicative of participation within a wider social framework (Hunter 1994a, 55), it is tempting to ponder if the earlier find here of a ‘round plate of copper’ (McIlwraith 1877, 58–9) may link Rispain Camp with the local mining of copper. Moreover, it is also worth noting that the site contains one of the largest roundhouses excavated in Galloway and that though Rispain Camp is not an especially defensive site, the scale of its fortifications dwarf those of Carghidown. With the exception of the more complex and strongly fortified, albeit undated, promontory fort at Isle Head (Toolis 2003, 50–1, 66 & 69), only one other unexcavated site in the South Machars, Drummoral, appears comparable in scale and topographical pre-eminence to Rispain Camp.

The excavations at Cruggleton Castle on the other hand revealed a roundhouse significantly smaller than that at Rispain Camp, though not so different from Carghidown. Radiocarbon dated to the end of the first millennium BC or start of the first millennium AD, albeit again from a mixed entity sample (Ewart 1985, 14), Cruggleton Castle, while also yielding evidence of high status metalwork (Caldwell 1985, 64), seems in terms of scale, like most of the local promontory forts (Toolis 2003, 60–70), a less pre-eminent settlement than Rispain Camp. An Iron Age settlement hierarchy, albeit incomplete, is therefore apparent in the South Machars, comparable to settlement hierarchies elsewhere in south-west Scotland (RCAHMS 1997, 76–86; Halliday 2002, 100) and perhaps dominated by pre-eminent households (Piggott 1953, 114; MacKie 1987, 16; Main 1998, 409; Dunwell 1999, 352).

If Carghidown was not as prominent within the local contemporary settlement hierarchy as Rispain Camp, Drummoral or Isle Head, its occupants nevertheless had some form of relationship with the inhabitants of the more pre-eminent settlements that enabled them

to participate in local systems of exchange and repeatedly exploit material and labour resources. Its precarious location, concealed by the lie of the land, is peculiar. It is tempting to think its rampart and ditch offered no more than a psychological comfort to its occupants, practical defence not considered a feasible aspect prior to the excavation (Toolis 2003, 63), the ‘defences’ being so compromised by the topography that any movement within the interior would be observable by potential assailants outside (Bowden & McOmish 1989, 13). However, while there was no evidence for a palisade and it is doubtful that the wall was ever wide enough to allow a walkway, it is worth noting that the ditch was vertically cut through 1.5m of natural subsoil and measured approximately 3m wide. The rampart originally measured almost 2m high above the ditch and was 3m broad at its base. This was a barrier 6m wide and 3.5m high and while somewhat less than the 5.8m high barrier formed by the rampart and inner rock-cut ditch at Rispain Camp (Haggarty & Haggarty 1983, 40), this was not merely a garden fence. The act of enclosing Carghidown represents substantial investment of labour and materials. However, it is doubtful that the rampart and ditch ever succeeded in making Carghidown an outwardly impressive site to behold, which puts it at variance with a commonly accepted explanation for defensive boundaries in Iron Age sites as fulfilling more a function of display for the purposes of prestige than the practicalities of defence (Bowden & McOmish 1987, 76; Collis 1996, 90; Armit 1997, 59). Those approaching Carghidown would have always looked down upon it. It is the opposite from many fortified Iron Age sites, such as the nearby sites of Rispain Camp, Drummoral and Isle Head, which occupy topographically prominent locations. One might conclude therefore that the enclosure of the site was carried out simply to reflect *per se* the status of the inhabitants, in terms of an act of social exclusivity (Hingley 1990, 96; Banks 2000, 273; 2002, 32; Harding 2004, 64) rather

than an ostentatious display of social exclusivity. Comparisons may be drawn with Stairhaven on the north-west coast of the Machars (Yates 1983, 95) and Doon Castle on the west coast of the Rhins, two enclosed sites containing brochs that occupy similar topographical locations to Carghidown (Toolis 2003, 63). If Carghidown possessed a two-storey timber roundhouse, as tentatively postulated above, the comparisons are even more compelling.

Accepting that status tied to some manner of social exclusivity was an issue for the inhabitants of Carghidown, the nature of the abandonment requires explanation. The occupation was halted abruptly during the construction of a new building and the repair of an existing building. At the same time the rampart was thrown down. While the slighting of the rampart was apparently violent, there was no evidence for a catastrophic destruction of the roundhouse, in comparison with Buchlyvie (Main 1998, 310), Leckie (MacKie 1982, 62) and Scalloway (Sharples 1998, 80). Only a very thin layer of relatively charcoal-rich material was evident within the roundhouse at Carghidown. While the secondary part of the ring-groove on the northern side of the roundhouse appeared to have been disturbed in comparison to the adjacent primary ring-groove (illus 8), the packing stones of many of the post-holes within the roundhouse were still in situ (illus 11), suggesting that what disturbance took place was haphazard and perhaps due to natural elements, not systematic or necessarily a result of human agency. Therefore, while the abandonment of the site was clearly deliberate, as demonstrated by the slighting of the rampart and ditch, the premature halt to re-occupation and absence of any subsequent occupation, an explanation based on ritualistic closure (Bowden & McOmish 1987, 78–9; Church 2002, 70) is not tenable as the interior of the settlement showed no signs of actual acts of closure comparable to the deliberate destruction of the rampart. The implication might also be that that Carghidown was abandoned as a result of hostile coercion.

With coerced abandonment of the site to consider, the diminutive but deliberately chosen location of Carghidown paradoxically strengthens its defensive aspect, the strength of the site perhaps being its concealment within the surrounding landscape. Its disadvantage, in being quite starkly overlooked (illus 2 & 24), depends upon any potential assailants first finding it. Nor is it unique in this aspect amongst the settlements of the Galloway coast, where sites such as Dinnans on the south-east coast of the Machars (Toolis 2003, 63), Dunorroch on the west coast of the Rhins (Ralston 2006, 37), as well as the brochs at Stairhaven and Doon Castle are also obscured within the landscape until one is upon them. Together with the evidence for sporadic occupation brought to an abrupt end, this aspect of its peculiar location suggests that Carghidown was, from its inception, planned as a refuge, a place of seclusion sought for temporary occupation when the threat of danger periodically occurred. Its defensive attribute depended upon its concealment within the landscape. Ironically, it may have been the formal enclosure of the settlement, ostensibly providing a substantial boundary but necessitating the importation of substantial labour and materials that may have raised its profile within the landscape, which perhaps contributed to its downfall.

If this interpretation is correct, this would imply not simply contemporary conflict at a low interpersonal or interneighbour level. That such a refuge was planned and deemed worth repeatedly investing in implies a severe level of conflict. While it is commonly accepted that warfare was endemic during the Iron Age (Cunliffe 1991, 497; Collis 1996, 88; Armit 1999, 76; Armit & Ralston 1997, 182; Ralston 2006, 124; Bowden 2006, 432), unequivocal evidence for this is difficult to discern (Sharples 1991, 80–3). The recovery of weapons from Iron Age contexts, such as the spearhead from Brighthouse Bay near Kirkcudbright (Hunter 1994b, 22), imply a capacity for violence, but at what level (interpersonal/interneighbour/intercommunity) or subject (human/animal) that violence was

directed is unclear. Even where clear injury and death of an individual resulting from armed combat is demonstrated (Card & Downes 2006, 1–2), the context for such violence is not. A stronger context for intercommunity or even interregional violence is perhaps represented by the sword tips included in the Carlingwark hoard, a large native votive deposit made at a regional or tribal level (Hunter 1997, 116–17 & 122) but this also highlights the immediate ritual context for many such artefacts. Like items such as the Deskford Carnyx or the decorated sword scabbards from Mortonhall and Bargany, the Torrs pony cap from Galloway (MacGregor 1976, nos 188, 150, 140 & 1 respectively), for instance, could be a potential accoutrement for martial display, given its stylistic links to the production of other items of martial display (Harding 2002, 204), potential association with chariots (Harding 2002, 193) and the evidence for chariot warfare in Iron Age Britain (Bowman & Thomas 1987, 136; Cunliffe 1995, 31). However, it is not evidence for martial activity per se, especially when such a role for chariots is contended (Stead 1965, 259; Carter & Hunter 2003, 534). The same rationale must apply to apparent ‘warrior graves’ such as those discovered in Alloa and Dunbar (Roy 2006, 4). Much of the warfare conducted in Iron Age Britain may have involved symbolic posture for the purposes of deterrence (Sharples 1991, 88). However, such ritualism cannot have been effective without the reality of what was signified (Harding 1999, 169–70; Kristiansen 1999, 88) and evidence for glorified violence in the South Machars during the Iron Age is provided by the skulls recovered from the ditch at Rispain Camp, one of which was pierced at the back (Barbour 1902, 624) and which probably originally adorned the rampart there.

However, the most compelling evidence for actual warfare, or violence at an intercommunity or interregional level, during the Iron Age is the violent destruction of settlements and fortifications. This is best exemplified by the vitrification of ramparts, apparent across

Scotland, from the mid first millennium BC to the later first millennium AD (MacKie 1976, 445; Ralston 1981, 86), which unequivocally demonstrate the spectacular and systematic, symbolic and practical, destruction of settlement defences after capture by assailants (Childe & Thorneycroft 1938, 55; Nisbet 1974, 4–5; MacKie 1976, 206–10; Harding 1979, 9; Ralston 1986a, 18 & 38; 2006, 163; Audouze & Buchsensschutz 1991, 97; Armit 1997, 59; cf Bowden & McOmish 1987, 79). The scale of destruction at many such sites, including several in south-west Scotland (Thomas 1961, 64; Truckell 1966, 149; Williams 1971, 115–17; Nisbet 1975, 11–16; Laing & Longley 2006, 10, 22–4 & 171), demonstrates the magnitude of resources required to achieve vitrification. Such resources could only have been marshalled at an intercommunity or interregional level. Nor is it only at forts enclosed by timber-laced ramparts that violent destruction is apparent. A number of pre-eminent settlements across southern Scotland including Leckie (MacKie 1982, 62; 1987, 1), Torwoodlee (Piggott 1953, 103) and Buchlyvie (Main 1998, 310; Armit 2003, 124) demonstrate clear evidence of violent overthrow. As well as providing examples of weapons found within a domestic context, Leckie and Buchlyvie also demonstrate that the occupants possessed considerable high status metalwork (MacKie 1987, 16; Hunter 1998b, 357; 1998c, 394–5) and together with the evidence from Edin’s Hall (Hunter 1999, 340) suggests that the inhabitants of these prominent settlements in southern Scotland were closely involved in the control of the mineral resources required to produce such metalwork. Given that agricultural technology and access to mineral wealth were prerequisite means to economic and political development in the Iron Age, warfare was an alternative means of acquiring such wealth and power, especially for those that did not inhabit areas endowed with these resources (Kristiansen 1999, 183) and might provide a feasible explanation for the frequent correlation in southern Scotland of such high status settlements with violent destruction

(Halliday 2002, 105) and the evidence for competition between other pre-eminent settlements elsewhere in south-west Scotland (RCAHMS 1997, 164). As at least one such pre-eminent settlement, Rispaïn camp, associated with advanced agriculture and mining, was present in the South Machars during the late first millennium BC and early first millennium AD, it is no surprise then that the threat of warfare was apparent too. Given the periodic occupation of Carghidown, such a threat of warfare perhaps only occurred sporadically, or seasonally in the same way that raiding was predominantly carried out at specific times of the year during the 16th century, another unstable period in southern Scotland (MacDonald Fraser 1995, 93–4).

Accepting this context, locally pre-eminent settlements like Rispaïn Camp, Drummoral and Isle Head may have posed as much as a target for enemies as a deterrent. Furthermore, given the indiscriminate nature of prehistoric warfare (Keeley 1996, 174–5), perhaps demonstrated by the decapitated skull of a young woman that once adorned the rampart of Rispaïn Camp (Bryce 1902, 625), a refuge such as Carghidown, some distance from the more prominent settlements, was understandably an attractive idea for non-combatants during outbreaks of warfare.

CONCLUSION

It might be with some trepidation that the idea of a refuge is offered as an explanation for an enclosed Iron Age settlement. This is not simply because the boundaries and indeed roles of such sites are more commonly interpreted as fulfilling largely symbolic functions (Bowden & McOmish 1987, 80; Hingley 1990; Sharples 1991, 81–83 & 88; Haselgrove 1992, 413; Armit 1997, 59–60) but that in the past, such explanations of defence (Wilson 1885, 64; Wilson 1980, 118; Ralston 1986b, 115) often appear speculative and based on assumptions more than positive evidence. This explanation is therefore not offered with regard to promontory

forts in general or other Iron Age settlements, for while valid comparisons to Carghidown have been drawn with a number of other sites, it is apparent that there is no one single explanation for enclosed Iron Age settlements (Armit 1999, 73; Harding 2004, 64).

The evidence from the excavations at Carghidown, however, suggests sporadic occupation of this site over a short period, during the late first millennium BC or early first millennium AD, by inhabitants of some status within the local social network. The evidence also demonstrates that the site was only formally enclosed during the later stages of its occupation and that within a year or two of this act of enclosure the ramparts were violently thrown down and the repair and construction of buildings within the settlement was abruptly halted and occupation ceased. Given the concealed setting of Carghidown within the landscape, its peripheral place within the contemporary settlement pattern and the violent context of contemporary society, the most credible explanation is that it principally functioned as a sporadically occupied refuge. Its significance lies in that, as a refuge, it implies planning and therefore a foreseen threat of a scale of violence that may be reasonably perceived as warfare. That it came to an unfortunate, premature demise bears testimony to the reality of that threat.

ACKNOWLEDGEMENTS

The author expresses sincere gratitude to John Scoular and Peter Simpson for all their assistance in allowing the excavations at Carghidown to take place. The author is also grateful to the fieldwork team of Darren Miller, Alan Hunter Blair, Alan Duffy, Tessa Poller, Angus Crawford, Vicky Ascott, James Foster and John Fraser. The project was supported with grants from the Dumfriesshire and Galloway Natural History & Antiquarian Society, Historic Scotland, the Mouswald Trust, the Russell Trust, the Royal Archaeological Institute and the Society of Antiquaries of Scotland. The author is grateful for the many helpful comments, advice and assistance received from Andrew Burke,

Ciara Clarke, Murray Cook, Tom Dawson, Allison Fox, Richard Heawood, Peter Hill, Jane Murray, John Pickin, Gwen Smart and Joanne Turner and especially Ian Ralston and Anne Crone for reviewing an earlier draft of this report. The comparable lead isotope samples were kindly provided by the Museum of Lead Mining at Wanlockhead and the Trustees of the Manx National Heritage. Alan Hunter Blair and Graeme Carruthers prepared the illustrations for this report. Fraser Hunter is grateful to Lore Troalen for XRF analysis, and Jack Hunter, John Pickin and John Scouler for information on the Tonderghie Mine. Lynne Fouracre is grateful to Erika Guttman for advice on the soil micromorphology report.

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This paper is published with the aid of a grant from Historic Scotland.

Appendix C: *Excavations at Trusty's Hill, 2012*

TRANSACTIONS
of the
DUMFRIESSHIRE AND GALLOWAY
NATURAL HISTORY
and
ANTIQUARIAN SOCIETY

FOUNDED 20 NOVEMBER 1862

THIRD SERIES VOLUME 87
LXXXVII

Editors:

ELAINE KENNEDY
FRANCIS TOOLIS
JAMES FOSTER

ISSN 0141-1292

2013

DUMFRIES

Published by the Council of the Society

EXCAVATIONS AT TRUSTY'S HILL, 2012

Ronan Toolis¹ and Christopher Bowles²

The Pictish inscribed stone at Trusty's Hill is unique in Dumfries and Galloway and has long puzzled scholars as to why this was carved here and if it is indeed genuine. As part of the 150th anniversary of the founding of the Dumfriesshire and Galloway Natural History and Antiquarian Society, the Galloway Picts Project was undertaken in 2012 in order to recover the evidence required to understand the archaeological context of the inscribed stone and the significance of Trusty's Hill within Early Medieval Scotland. The following paper is intended simply as an interim summary report, in advance of a monograph reporting the full analyses and results (Toolis and Bowles forthcoming).

Introduction

Trusty's Hill, located just outside Gatehouse of Fleet (Figure 1) is unique amongst the hillforts of Galloway in that it contains a Pictish inscribed stone, depicting a 'z-rod and double disc' symbol and a 'sea beast and sword' symbol (Figure 2). These Pictish carvings have, until now, made Trusty's Hill perhaps one of the most enigmatic archaeological sites in Scotland.

The site is first mentioned in the Anwoth parish account of the *Statistical Account of Scotland* as 'one of those vitrified forts which have lately excited the curiosity of modern antiquaries', which further notes that 'on the south side of this fort there is a broad flat stone, inscribed with several waving and spiral lines, which exhibit however no regular figure' and 'near it likewise were lately found several silver coins; one of King Edward VI; the rest of Queen Elizabeth' (Gordon 1794, 351). The recognition of the carvings, but not their form, suggests an unfamiliarity with Pictish carvings being studied in northern Scotland by contemporary scholarship (Henderson 1993, 13). The carved stone may also have been obscured by vegetation or lichen at this time indicating the stone, and perhaps the fort, had been forgotten during the intervening period between the deposition of the late medieval coin hoard and the eighteenth century. The dawn of antiquarian interest referenced in the *Statistical Account* no doubt influenced local individuals to seek out sites like Trusty's Hill in the landscape.

The carved symbols were first drawn by John Stuart, who also first recorded that the hill went by the name of Trusty's Hill (Stuart 1856, 31). Stuart doubted whether the horned figure at the bottom was nothing more than a recent addition to the other carvings (*Ibid.*). Local knowledge of the stone during the nineteenth century must have been considerable, as there is a substantial amount of graffiti adorning the stone from this period.

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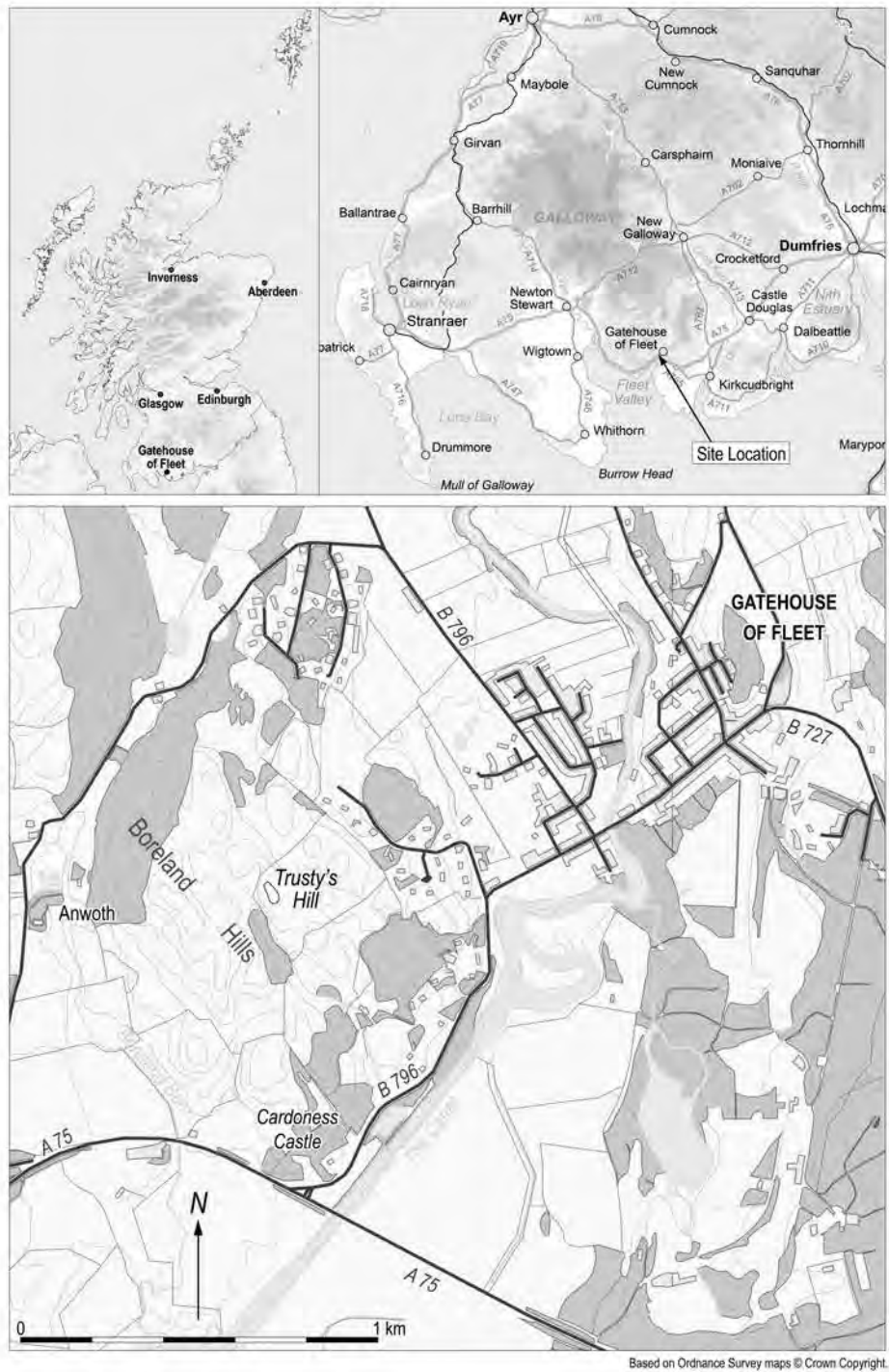


Figure 1. Site location.

Survey of the site was first undertaken around 1850 by the Ordnance Survey for the First Edition 6-inch (1:10560 scale) map. However, while the basic shape of the fort is recognisably correct, much of the finer detail is missing. The subsequent 1:2500 plan of the site by the Ordnance Survey in the 1890s is even less detailed, the surveyors appearing to have abandoned the premise of a small hilltop citadel in favour of a larger oval enclosure.

The first detailed plan of the site was in fact made around the same time in the 1890s by Frederick Coles, assistant curator at the National Museum of Scotland, who recorded un-mortared stonework around the summit but noted that according to 'accurate observers' the walls were regular and compact and exhibited vitrification 40 or 50 years previously (Coles 1893, 173-4). Of most interest to Coles were the 'Dolphin' and 'Sceptre and Spectacle Ornament' carvings; he concurred with Stuart in dismissing the lowest figure as of recent origin (Coles 1893, 174). The hill is still known locally as the 'Deil's Specs', and this name and the suggestion of 'spectacles' may have been common by the time Coles made his observations. Coles made other interesting notes: that he could not find the cup and ring marks said to be near this sculpturing and that the antiquity of the name, Trusty's Hill, could be dismissed as the invention of a certain Allan Kowen, who fifty years before had rented a small croft near the foot of the hill and founded the legend about 'Trusty' (*Ibid.*).

The Pictish symbols at Trusty's Hill are included in John Romilly Allen and Joseph Anderson's survey of *Early Christian Monuments in Scotland* (Allen and Anderson 1903, 477-478), who classify the z-rod and double disc symbol and dolphin symbol as Class I (Allen and Anderson 1903, 92). They were the first to note the protective cage of iron bars



Figure 2. Pictish inscribed stone.

that still protects the carvings today (Allen and Anderson 1903, 478). The Royal Commission on Ancient and Historical Monuments of Scotland (RCAHMS) Inventory of Monuments in Galloway largely repeats this information (RCAHMS 1914, 15).

Interest in Trusty's Hill was maintained by the Dumfriesshire and Galloway Natural History and Antiquarian Society (Reid 1930; Reid 1952) before it attracted the attention of C.A. Raleigh Radford, the first of a new generation of post-war archaeologists to comment on the stone. He considered the horned head to have been retouched in modern times but thought the form to be old (Raleigh Radford 1953, 237). Crucially, Raleigh Radford pointed out the similar relationship of the Pictish symbols at Trusty's Hill to two other non-Pictish forts, Dunadd and Edinburgh Castle Rock, which either contain or lie in proximity to Pictish symbols. Based on the reference in the medieval life of St Kentigern to a stone erected to mark the spot where King Leudon fell, Raleigh Radford postulated that these carvings commemorated Pictish leaders who had fallen in attacks on these fortresses (Raleigh Radford 1953, 238). He classed the symbols as Class II, and considered them late seventh or early eighth century AD by analogy with likely Pictish raids in southern Scotland in the decades following the battle of Nechtansmere (Raleigh Radford 1953, 239).

The first known excavation of Trusty's Hill was directed by Charles Thomas in 1960, following encouragement from R.C. Reid (Thomas personal communication). R.C. Reid, then one of the editors of the *Transactions of the DGNHAS*, had long advocated the excavation of Trusty's Hill (Reid 1930, 367; 1952, 163-164). Thomas, working to a shoe-string budget over two rain-soaked weeks, was nevertheless able to confirm the presence of vitrified ramparts around the summit. His excavations also encountered evidence for occupation, notably animal bones, charcoal and the lower half of a rotary quern. However, no evidence was encountered that could date the occupation of the fort, demonstrate the status of its inhabitants or explicitly link the occupation of the fort with the carvings (Thomas 1961). Despite this lack of conclusive evidence, Thomas interpreted two widely separate phases of occupation to the site on analogy with other western British hillforts. The first phase, in Thomas's scheme, was attributed to the first century AD while the second phase was ascribed to the post-Roman period based on similarities with nuclear (or nucleated) forts such as Dunadd and Dalmahoy (Thomas 1961, 66-68). Thomas concurred with Raleigh Radford in attributing the carvings as commemorating a fallen Pictish leader responsible for the fort's fiery demise (Thomas 1961, 60). However, he considered the Pictish symbols to be Class I, late sixth or early seventh century AD, based on the apparent improbability of Pictish raiders coming so far south post-Nechtansmere (i.e. after 685 AD). Thomas also postulated that the excessive floriation of the z-rod and the insertion of its central portion between the bars of the double disc's 'waist' was closer to 600 AD than 500 AD (Thomas 1961, 68-69).

In the years following Thomas' excavations, discussions of Trusty's Hill focussed on stylistic comparison with other Pictish symbols rather than the archaeological context that Thomas established. Isabel Henderson, in dismissing early Pictish occupation of Galloway, considered the Pictish symbols at Trusty's Hill to be a late Class II 'perversion' (Henderson 1960, 50) based on stylistic analysis of northern Pictish symbols, and which therefore could be 'safely dismissed as an outlier' (Henderson 1967, 114). Wainwright also

considered the Pictish symbols at Trusty's Hill, like those at Edinburgh, to be strays outside the main distribution of Pictish stones in his arguments against Pictland stretching south of the Forth–Clyde (Wainwright 1980, 36–44). Anthony Jackson went even further, dismissing the carvings at Trusty's Hill, as well as at many other sites, as dubious owing to their uncommon symbols (Jackson 1984, 37). Richard Oram, in his argument against Pictish settlement in Galloway, again questioned the Pictish authenticity of the carvings and refused to discount the possibility that they are relatively modern forgeries (Oram 1993, 15). These largely dismissive commentaries between the 1960s and 1990s meant that Trusty's Hill was not accorded the same attention as other contemporary sites in southern Scotland such as the Mote of Mark, Whithorn, Dumbarton Rock, Govan or Edinburgh Castle.

By the end of the 1990s, a growing emphasis in Scottish archaeology on Pictish studies and the understanding of the archaeological contexts of carved stones allowed scholars to consider Trusty's Hill once again. At the turn of the millennium, Lloyd Laing observed that since the symbols appear to have been cut at the same time, they must pre-date Stuart's mid-nineteenth century drawing by some duration for him to have considered them genuine (Laing 2000, 10). Laing commented that this would project any forgery, as postulated by Oram and Jackson, to a period when interest and knowledge of Pictish symbols was virtually non-existent. He accepted that the carvings should be seen as ancient, though whether they were Pictish or not was another matter (*Ibid.*). Laing argued that, apart from the horned head and sword which might be Iron Age, the other symbols at Trusty's Hill were inspired by relief carvings on a Class II monument and that they were executed by someone who had seen Class II Pictish Stones but had not remembered them correctly (Laing 2000, 11).

As he considered it unlikely that Class II stones pre-date the mid-eighth century AD, and that the majority are ninth century AD, Laing therefore rejected the explanation of a Pictish raiding party for the carvings at Trusty's Hill, preferring instead that the symbols commemorated a marriage between a Pict and a Galloway noble, perhaps an Anglian, (*Ibid.*). However, while Craig Cessford admitted that the raiding party theory for the carving of Pictish symbols outwith Pictland had attained the status of a 'factoid', and considered a variety of other explanations, he concluded that this theory was still the most likely (Cessford 1994, 81–86).

The possibility of solving part of the mystery was aroused by a relatively recent survey of the Pictish inscribed stone, which had apparently discovered previously unnoticed ogham (Fraser 2008, 64–65). The identification of ogham on a stone bearing Pictish symbols potentially mirrored the combination on inscribed stones in north east Scotland, such as Kirriemuir and St Vigean (Fraser 2008, 7 & 64–65) and the Brodie Stone in Elgin (Laing 2000, 10). However, the resolution of this survey, hampered in part by the iron cage that protects the stone, meant that the inscription could not be translated (John Boreland personal communication; Katherine Forsyth personal communication).

The continuing revelations of the stone, and the need to better understand its context, led to new questions being asked about how Trusty's Hill fits into our wider knowledge of early medieval Britain. As part of the 150th anniversary of the founding of the Dum-

friesshire and Galloway Natural History and Antiquarian Society, the Society launched the Galloway Picts Project in 2012. The aim of the project was to recover, for modern analysis, the artefacts, environmental and dating evidence not recovered during the previous excavation in order to provide an archaeological context for the Pictish carvings on Trusty's Hill. Adherence to a detailed research design and methodology, agreed in advance with Historic Scotland, was required as a condition of Scheduled Monument Consent. The hope from the outset was that new information would be found to elucidate why Pictish symbols were inscribed at this small hillfort in Galloway, so far from the Pictish heartlands of north east Scotland, and if the inscribed symbols are indeed genuine.

Results

The Galloway Picts Project got underway with a new Global Positioning System (GPS) topographic survey of Trusty's Hill by RCAHMS. This produced for the first time a detailed measured plan of this Scheduled Ancient Monument: a necessary preparation for the subsequent excavation to allow accurate recording of the trenches and any features discovered. The topographic survey updates the measured sketch plan that Thomas produced during the previous excavation, providing the most accurate plan of the site to date (Figure 3).

The subsequent archaeological excavation, comprising four separate trenches, was undertaken by 65 volunteers in collaboration with GUARD Archaeology Ltd (Figure 4) between 20 May and 2 June 2012. The identification number attributed to each trench adhered to Thomas' system. Therefore Trench 2 was excavated to examine the circular depression at the entranceway, Trenches 4 and 5 to examine the eastern and western sides of the central summit enclosure respectively and Trench 6 to examine the rock-cut ditch at the northern side of the site (Figure 3). The total area exposed measured 74.6 m², which represents 2.6 % of the entire hillfort. However, as the conditions of Scheduled Monument Consent stipulated, the Galloway Picts Project team were only permitted to excavate half of the deposits exposed and therefore only approximately 1.3% of the site was excavated.

The 2012 excavations nevertheless reached a greater depth than the 1960 excavations, demonstrating that the occupation deposits encountered by Charles Thomas in Trench 4 in 1960 overlay the collapsed rampart and may perhaps be better characterised as post-destruction deposits, while the stone rampart encountered in Trench 5 in 1960 was in fact the interior rubble collapse of the rampart rather than the rampart itself. The recovery of a significant number and quality of artefacts from the backfill of Trenches 4 and 5 also demonstrated that the 1960 excavation had not recovered the full artefactual assemblage contained within the deposits it encountered. However, this was almost certainly due to the scarce resources and torrential rain that the 1960 excavation endured throughout its duration. On the one day that rain occurred during the 2012 excavation, it was exceedingly difficult to observe artefacts in the now sticky dark soil deposits, even when sieving. Fortunately, the 2012 excavation was conducted in predominantly sunny dry conditions, which, together with greater volunteer and professional supervisory resources and the employment of a large dry sieving table for almost all of the excavated soil deposits, maximised the recovery of artefacts. Other than topsoil, the only excavated soil deposits not sieved on

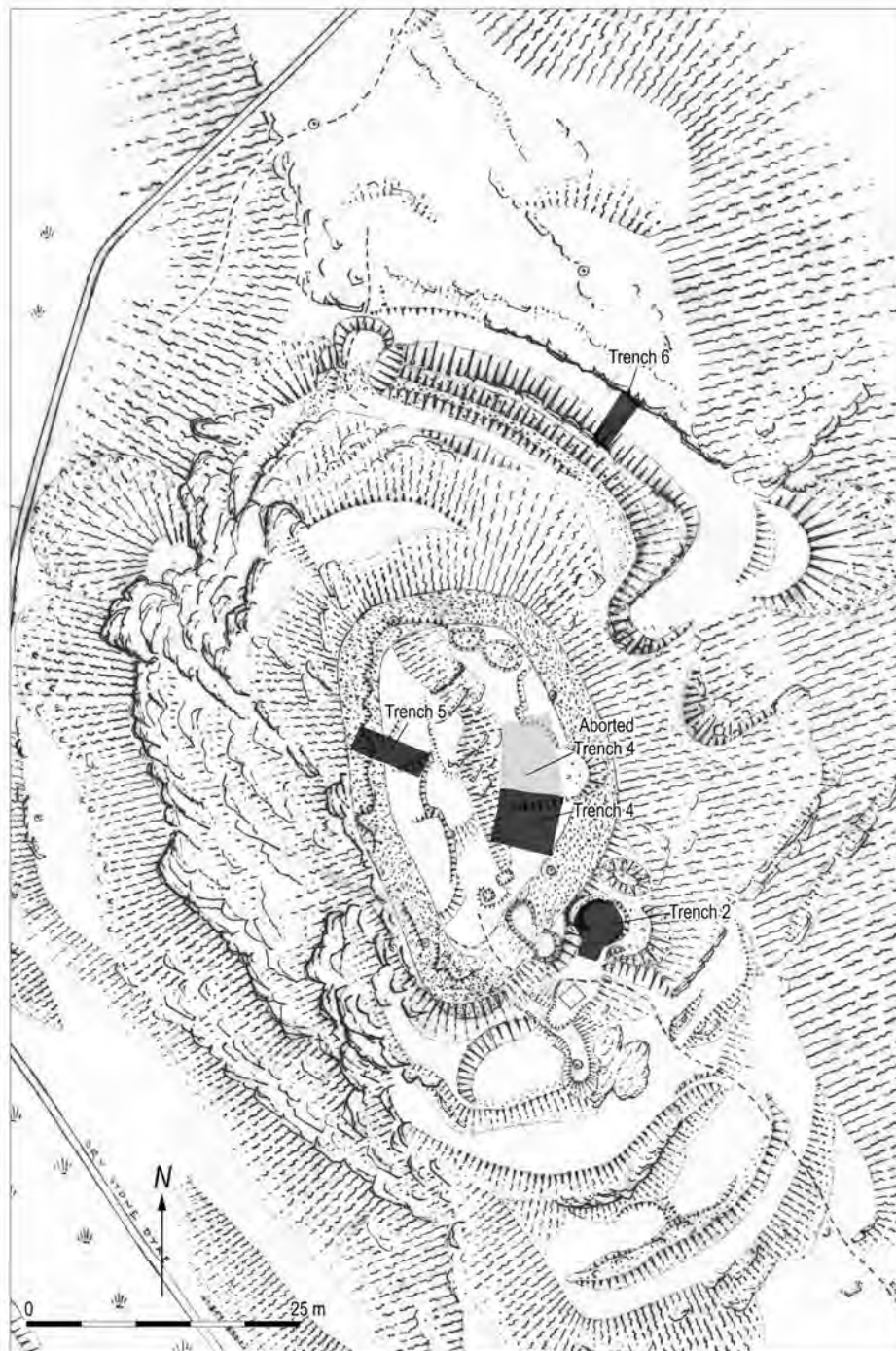


Figure 3. Topographic plan of Trusty's Hill overlaid with 2012 excavation trenches.
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Figure 4. Volunteers excavating the vitrified rampart and associated occupation deposits in Trench 4.



Figure 5. Dark soil layer abutting the interior side of rampart in Trench 4.

site during the excavation were those deposits taken for palaeo-environmental assessment. The subsequent process of wet-sieving, sorting and assessment recovered several important artefacts, including clay mould fragments and a glass bead fragment, again maximising the recovery of artefacts from the 2012 excavation.

The majority of the artefacts were recovered from Trenches 4 and 5, on the east and west sides of the central summit respectively (Figure 3). The stratigraphy of contexts within both of these excavation trenches was remarkably consistent. In both cases, the collapsed rubble of the ramparts, which was as far as Charles Thomas' excavations had reached, sealed a dark soil layer that abutted the rampart (Figure 5). This dark soil sealed the collapsed interior stone faces of the rampart, which in turn sealed an underlying construction layer. The construction layer was shown to underlie the rampart core and formed the primary fill of a rock-cut shelf along the perimeter of the summit (Figure 6). Soil micro-morphological analysis of the construction layer in Trench 5 revealed that this was a deliberate dump of materials, where accumulation was rapid. Furthermore, trampling was not evident, indicating that this material had been imported deliberately to provide a level base for the construction of the rampart. Several occupation deposits, stratigraphically earlier than the construction of the rampart, were also apparent within the interior side of Trench 4.

The charcoal rich dark soil layers that abutted the interior faces of the rampart in Trenches 4 and 5 were particularly rich in finds. Ample evidence was discovered for domestic



Figure 6. South facing section through rampart collapse and underlying construction deposits in Trench 5.

occupation, such as animal bones (predominantly cattle but also including sheep/goat and pig), and a spindle whorl. But the greatest component of the site's assemblage related to industrial activity. Evidence for leather working came from a socketed three pronged iron tool of an early medieval type and a variety of rubbing stones, for smoothing and adding suppleness to leather items. There was also strong evidence of high status metalworking. This took the form of clay moulds, crucibles, heating trays, furnace lining, hearth bottoms, a possible crucible stand and a stone anvil. X-ray Fluorescence (XRF) analysis of the non-ferrous metalworking debris has revealed traces of gold, silver, copper and lead. An iron metalworking file and smithing debris were also recovered as were a number of fire-flints, which may be related to igniting furnaces. Furthermore, isotope analysis of a lead strip recovered from Trench 4 revealed that it originated from Southern Upland lead ore suggesting exploitation, and perhaps control, of local metal sources. Interestingly, a samian pottery sherd, dating to the first/second centuries AD, had evidently been re-used on the site. The imported Roman sherd had been rubbed down on one edge, a common practice on native sites and sometimes associated with metalworking often at periods later than the Roman period (Campbell 2011). This sherd of samian ware was recovered from the dark soil deposit in Trench 5 that provided an Accelerator Mass Spectrometry (AMS) radiocarbon date of 533-643 AD (Scottish Universities Environmental Research Centre SUERC-41598).

In addition to the evidence for industrial activities, the artefacts also provided a glimpse of high status material culture. Part of a middle Iron Age glass bead was recovered from the construction layer in Trench 5, likely a residual artefact from the earliest occupation of the site. Early medieval high status metalwork was encountered in the form of an Anglian influenced, copper alloy horse harness mount. The object was ornamented with Germanic style II birds' head decorations around a central setting, and included probable leather remains preserved on the reverse in the region of three copper-alloy attachment lugs. This can be dated to the late sixth to early seventh century AD on stylistic grounds. A decorative thistle-headed iron pin was also recovered. Two bands of incised decoration, comprising diagonal lines bounded by a horizontal line on each side, encircled the swollen round-sectioned shank of this pin. X-rays of the pin revealed traces of copper alloy inlay within the incised decoration. The head form, swollen shanks and decorative style indicate a comparable early medieval date to the horse harness. In addition to the ornamental metalwork, there was also evidence for more mundane metal objects such as a dish-headed iron mount and an iron vessel handle fragment. While there was no evidence for locally made ceramic vessels, a rim sherd of a small E-ware jar, imported from western France in the late sixth or seventh centuries AD, was among the most important discoveries made during the excavations. Analysis of organic residues on the interior side of this E-ware sherd indicates traces of animal fat. Finally, it is worth noting that a significant quantity of sling stones was recovered from the eastern interior of the summit near the collapsed ramparts in Trench 4 indicating the inhabitants' desire to defend themselves.

The finds recovered from the Trusty's Hill excavation included organic material that points to various activities and structures. The charcoal assemblage from the summit was dominated by large amounts of hazel and oak, but with significant amounts of ash also present, perhaps suggesting structural remains. However, the evidence for metalworking

activities may indicate that some of this charcoal derived from the remains of fuel from forges and furnaces. In addition, minor amounts of alder, birch and willow, a small carbonised cereal grain assemblage (barley and oats) and hazel nutshells were recovered. A fragment of hazel charcoal from the dark soil deposit in Trench 4 provided an AMS radiocarbon date of 536-646 AD (SUERC-41592), while another hazel sample from the construction layer beneath the rampart in Trench 4 provided an AMS radiocarbon date of 529-623 AD (SUERC-41597). A fragment of hazel charcoal from the matrix of the rampart on the western side of the summit provided an AMS radiocarbon date of 536-646 AD (SUERC-41600). However, a similar sample from the construction layer beneath the rampart in Trench 5, provided an AMS radiocarbon date of 513-378 BC (SUERC-41599). A portion of alder charcoal from the base of the rampart, again on the western side of the summit, also provided an AMS radiocarbon date of 515-381 BC (SUERC-41601).

In addition to the carbonised organic materials, the partial excavation of the ramparts on the east and west sides of the summit also revealed consistent evidence for the timber sub-structure of the rampart in the form of large upright post-holes and voids. It was observed that the distance of 1.6 m between two post-voids in the rampart on the east side was similar to the distance between small scoops evident in the topographic survey of the rampart along the north west side of the summit (Figure 3), indicating that the evidence for the ramparts' internal timber structure exposed in Trenches 4 and 5 can be applied to the remainder of the unexcavated rampart.

The evidence of in situ vitrified stone from the core of the rampart on both sides of the summit, along with the observation of vitrified stone in an exposed scarp on the north side and the spread of collapsed vitrified stones across the rock-cut basin on the south east side of Trusty's Hill, indicates vitrification along the entirety of the summit rampart. The un-burnt outer stone face of the rampart on the east side had collapsed separately prior to the burning of the rubble core (Figure 7), as had the inner stone face (Figure 8). Soil micro-morphological analysis of the charcoal rich dark soil abutting the interior side of the rampart core on the east side of the summit concluded that this was trampled and lightly vegetated, but not an occupation floor or ground surface, before it was sealed by the rapid collapse of vitrified rubble from the rampart core.

In contrast to Trenches 4 and 5, the excavation of Trench 6 did not recover any new archaeological evidence. Indeed, it was difficult to reconcile the single uniform deposit encountered within the rock-cut ditch with the record of stratified deposits exposed during the 1960 excavation.

The excavation of Trench 2, on the other hand, did encounter deposits consistent with the previous work undertaken by Charles Thomas. The earliest stratigraphic feature cutting the natural greywacke bedrock within Trench 2 was a rock-cut basin. Only the eastern half of this feature was excavated and exposed (Figure 9). The primary fill deposit within this rock-cut basin comprised a heavily waterlogged, very soft, dark brown organic silt, 0.2 m deep, with frequent inclusions of wood, unburnt and cremated animal bones, charcoal, vitrified stone and rounded pebbles and cobbles. The primary objective of excavating Trench



Figure 7. The un-burnt collapsed outer stone face of the rampart in Trench 4.



Figure 8. The un-burnt collapsed inner stone face of the rampart in Trench 4.

2 was to enable excavation of this primary waterlogged soil deposit. Several soil samples and fragments of wood were recovered for archaeo-botanical analysis. Study of the wood revealed that this was mainly hazel, with some oak and a small amount of willow also present. The wood remains suggest that some form of wattle structure may have been present, with oak stakes and possibly hazel poles providing the uprights, while hazel and possibly split willow were woven between them. A fragment of hazel wood provided an AMS radiocarbon date of 661-773 AD (SUERC-41590). Arranged along the break of slope curving along the top of the southern perimeter of the rock-cut basin were large rounded granite boulders and angular greywacke stones. This arrangement of stones appeared to continue west, outwith the break of slope of the rock-cut basin, where it formed a straight east/west aligned edge, towards the entranceway to the central summit of Trusty's Hill.



Figure 9. The south east facing section of the rock-cut basin in Trench 2.

The final stage of the 2012 fieldwork at Trusty's Hill focussed on the Pictish inscribed greywacke outcrop near the entrance to the summit. The iron cage protecting the stone was removed to allow cleaning (Figure 10) and a laser scan survey by the Centre for Digital Documentation and Visualisation (CDDV). The results of this new laser scan survey offer a comprehensive depiction of the Pictish inscription and other carvings for the first time (Figure 11). The scan corrects several discrepancies from previous depictions, such as the z-rod and double disc symbol which do not interweave as incorrectly depicted previously (Allen and Anderson 1903, 477-478), but intercut each other across the lower bar of the double disc. The laser scan also demonstrates that there is in fact no ogham along



Figure 10. Pictish inscribed stone after cleaning.

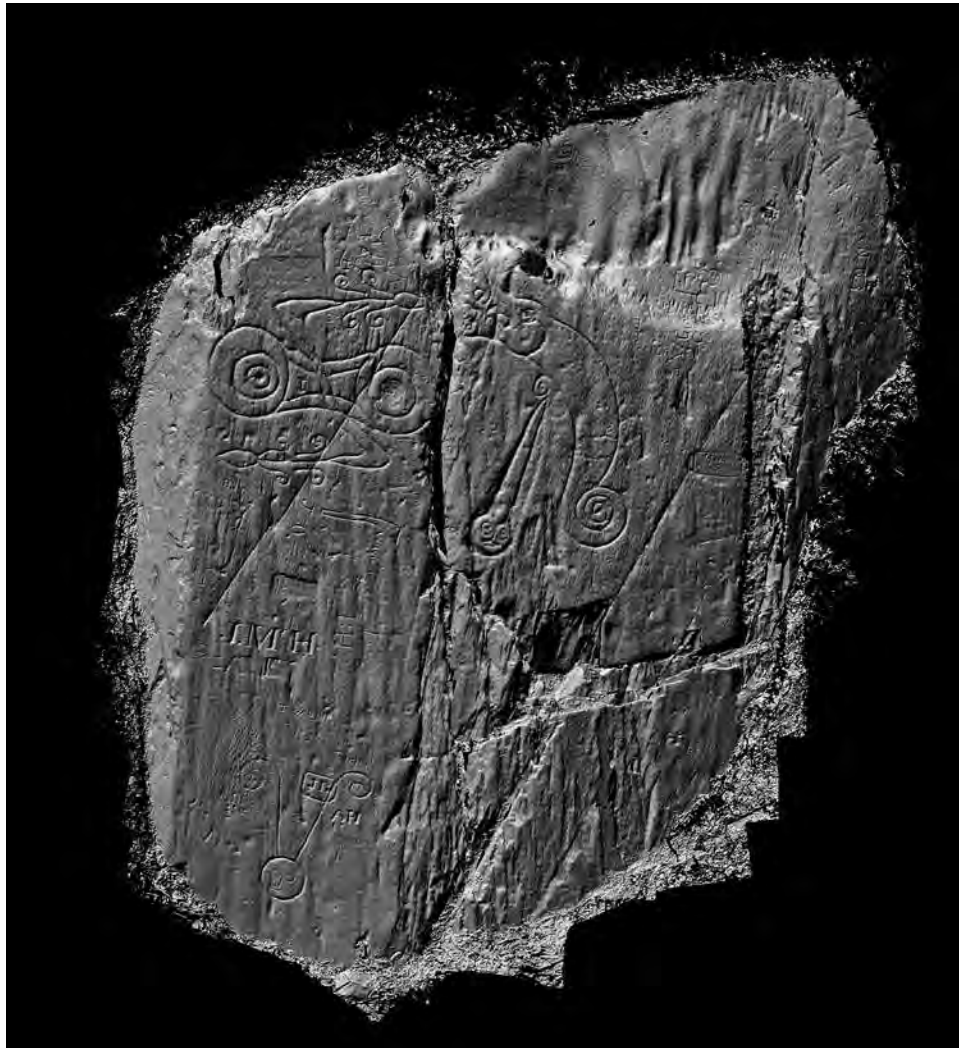


Figure 11. Laser scan survey of inscribed symbols at Trusty's Hill, 2012. Copyright of DGNHAS.

the southern edge of the inscribed stone, again as incorrectly depicted previously (Fraser 2008, 64-65). The new laser scan also revealed that the horned head, thought by some to be original (Cessford 1994, 85-86), clearly cuts nineteenth-century graffiti and is therefore of nineteenth-century origin. Furthermore, new analysis confirms that there does not appear to be a physical reason why the symbols must be modern as they do not overlie any of the modern carvings. Crucially, the precise form of the z-rod and double disc suggests that its carver was sufficiently familiar with Pictish symbol conventions to capture some 'canonical' details of the form. However, certain deviations simultaneously suggest that this person was either unskilled in the Pictish idiom common above the Forth, or was contemporary with and attempting to emulate developments in Pictish symbols found on later Class I or even Class II stones.

Discussion

While specialist analysis has still some way to go before it is completed, it is clear that the evidence recovered from the 2012 excavation has considerably enhanced the archaeological context of the Pictish Carvings at Trusty's Hill and corroborated much of Thomas's earlier interpretations.

The RCAHMS topographic survey demonstrates that Trusty's Hill comprises a fortified citadel around the summit of a craggy hill with a number of lesser enclosures looping out from the summit along lower lying terraces (Figure 12). It recognisably conforms to the definition of a nuclear fort (Stevenson 1949, 190-191; Alcock et al. 1989, 206), perhaps developing from the class of 'courtyard' forts apparent in Galloway (Truckell 1963, 95). It seems reasonable to conclude from the upstanding elements of the fort alone that the form and layout of Trusty's Hill is consistent with a type of fortified, hierarchical, high status secular settlement that emerged in Scotland during the early medieval period. The survey also depicts subtle clues to the destruction of the fort in the form of evenly spaced hollows where timber uprights were probably burned in situ. The process of fortification and destruction evident in the RCAHMS survey highlights the exceptional preservation of contexts within the site.

Radiocarbon dating and a single glass bead fragment recovered from the west side of the summit indicates initial occupation of Trusty's Hill around 400 BC. However, it is unlikely that the summit rampart originated at this time, as an early sixth to early seventh century AD date was obtained from the construction layer beneath the rampart on the east side and another early sixth to early seventh century AD date was taken from the vitrified rampart itself on the west side. Rather, it is more likely that the Iron Age material found within the foundation trench of the vitrified rampart in Trench 5 is residual, probably having been swept up from the interior of the site and laid out as a bed of material for the timber frame and stone core of the rampart. The Iron Age occupation of Trusty's Hill appears to have been followed by a hiatus of some centuries. Bayesian analysis suggests that the hill was re-occupied, subsequently fortified with a timber-laced rampart around its summit and then destroyed, between the late fifth and early seventh centuries AD. Thus, the early medieval occupation of Trusty's Hill can be securely fixed to around the sixth century AD. The radiocarbon dating results correspond quite closely with the vast bulk of the artefacts, such as the E-ware pottery sherd and the metalwork and crucible sherds which predominantly date to the same late fifth to early seventh century AD period. That is not to say that there were not several phases of building or development during the sixth century occupation of the hill. While largely unexamined in 2012, the outer ramparts, as would be expected in comparison with other similar sites, may well represent a piecemeal development of the site subsequent to the construction of the summit rampart. However, given the comprehensive destruction of the summit rampart and absence of occupation subsequent to this, it is highly unlikely that the outer ramparts were constructed after the destruction of the summit rampart.

Interestingly, the dating evidence recovered from the 2012 excavation broadly accords with Charles Thomas' interpretation of two phases of occupation; that of an original Iron



Figure 12. Nucleated Fort layout of Trusty's Hill. Copyright of RCAHMS and DGNHAS.

Age site re-occupied in the fifth to early seventh centuries AD (1961, 66-68). The likely date of the destruction of the ramparts at Trusty's Hill, in the early seventh century AD, broadly corresponds with the likely date for the destruction of the Mote of Mark (Laing and Longley 2006, 23-24) and raises the possibility that the destruction of these two fortified sites was the result of a single campaign of warfare across the entire region, instead of discrete episodes of localised conflict.

The consistent stratigraphy apparent on the eastern and western side of the summit represents securely stratified archaeological contexts for the artefact assemblage, spanning the period from prior to the construction of the timber-laced ramparts to their destruction. The dark soil from which most of the artefacts were recovered, however, separates the un-burnt collapsed interior stone face of the rampart from its burnt and vitrified rubble core collapse, indicating that this layer and its artefacts were trampled in during a prolonged phase of destruction. While the final deposition of the artefact assemblage therefore derives from the destruction of the summit, it is almost certain that these objects ultimately derive from the occupation of the summit prior to this destruction. The assemblage, despite the limited excavation of Trusty's Hill (just over 1% of the total area), and the necessary focus on earlier trenches, points to a socially elite occupation of Trusty's Hill. The E-ware sherd indicates that the inhabitants of Trusty's Hill had access to luxury goods from the Continent during the sixth to seventh centuries AD. Furthermore, the range and quality of metalworking evidence suggests that Trusty's Hill was an important metalworking centre with access to significant local resources and craftworkers. The thistle-headed pin is particularly impressive as finely crafted, decorated iron pins are rare, probably due to the immense amount of metalworking skill required to produce these. Though the form of head, swollen shank and decorative bands of the Trusty's Hill pin can all be paralleled in pins from other early medieval sites, including a mould for a near identical copper alloy thistle-headed pin found at the Mote of Mark (Laing and Longley 2006, 61), it is the rare choice of iron as a material which makes it special. Whether produced at Trusty's Hill or imported from elsewhere, the Anglian zoomorphic harness fitting is also a fine example of the highly accomplished craft skills of artisans at the time. An important component of the overall artefact assemblage is the exceptional range of objects and debris associated with metalworking itself. From crucible and mould fragments to anvils and hammerscale, one gets a sense of a continuously active smithy producing a wide range of goods from the mundane to the beautiful and all in the service of the social and economic relationships of Trusty's Hill's inhabitants.

The quality of the material assemblage appears to be comparable with other high status sites in south west Scotland, such as the Mote of Mark, Whithorn, Tynron Doon and Buis-ton Crannog (Laing and Longley 2006; Williams 1971; Hill 1997; Crone 2000), and royal sites in Northern Britain such as Dunadd, Dumbarton Rock and Edinburgh Castle Rock (Campbell and Lane 2000; Alcock and Alcock 1990; Driscoll and Yeoman 1997). Initial work appears to confirm that the faunal bone assemblage from Trusty's Hill also fits a pattern seen at the Mote of Mark and Dunadd where cattle is the (heavily) dominant taxa with sheep/goat and pig of less importance. The faunal remains imply access to cattle herds and the acquisition of animals from a variety of sources. The reliance on cattle in early medieval high status diet and economies is a widely known phenomenon in western Britain and Ireland (Alcock 2003, 113).

The status of Trusty's Hill and its inhabitants is perhaps best exemplified by its spectacular destruction. Experiments have shown that the vitrification of timber-laced ramparts took experience, substantial man-power and a great deal of time to accomplish (Childe and Thorneycroft 1938, 53-55; Ralston 1986, 38; Ralston 1995, 66). The evidence from Trusty's Hill points to a considerable effort and co-ordination to completely eradicate the fort's defences. Given the enormous number of timbers within the rampart core, it is likely that each upright would require individual attention. Indeed, the collapse of the inner and outer stone faces of the rampart was probably a deliberate attempt to expose the ramparts' core and increase draughts to the flames engulfing the interior timbers. The scale and method of setting the ramparts alight at Trusty's Hill unequivocally demonstrates the spectacular and systematic, symbolic and practical destruction of the defences. The vitrification in the ramparts, and the required level of coordinated and prolonged destruction, point to the status the fort and its inhabitants once held. But this act also perhaps indicates the wide sphere of influence that centred on the site.

The destruction of the ramparts at both Trusty's Hill and Mote of Mark would have been highly visible from the wider landscape for a considerable period of time. While there is an argument for this spectacle being done by the residents themselves, perhaps as a ritual 'killing' of the site at the end of its occupation, this does not seem credible. The more convincing explanation, given the concerted, systematic and sustained process required, the magnitude of resources and the historical parallels, is that Trusty's Hill's fiery demise was the result of its capture by assailants. The close dates for the destruction of Trusty's Hill and the Mote of Mark suggests this may have been during a period of warfare across the region, rather than an isolated event of local conflict. It is worth noting in this regard that the extension of Northumbrian hegemony to Galloway, and the Anglian occupation of sites such as Hoddum and Whithorn, were occurring at this time in the early seventh century AD. While there is no contemporary historical evidence for the Northumbrian expansion into Galloway being violent, Trusty's Hill is a visceral reminder that early medieval power politics often came with sword and flame.

However, the hill, the Pictish carvings and their histories may have been remembered in the area long after the last inhabitants of the hill fled or were killed. The radiocarbon date of 661-773 AD taken from the lowest fill of the rock-cut basin opposite the Pictish carvings demonstrates that the use of this feature continued into the later seventh to eighth centuries AD, after the destruction of the fort. On excavation, it was apparent that this was not a guard-hut as Thomas proposed (Thomas 1961, 66). Instead, it would be more correct to describe it as a rock-cut basin that collected surface water, as Thomas himself observed. The basin's form and location in relation to the remainder of the settlement – outside the central summit enclosure and opposite the Pictish carvings at the entranceway – indicates that its purpose was not simply functional. It is perhaps more likely that it served a votive or ceremonial purpose, as part of a ritualised entranceway to the summit of the fort prior to the destruction of the timber-laced ramparts. The radiocarbon date from the primary fill of the rock-cut basin suggests that it was of sufficient importance to merit continued use long after occupation of the hillfort had ended. Indeed, the record of a hoard of silver coins of Edward VI and Elizabeth I being found near to the carvings may suggest continued use of this votive 'well' until as late as the sixteenth century (Gordon 1794, 351).

The analysis of the new laser scan of the Pictish inscription reveals that the symbols at Trusty's Hill are genuine and authentic. The Trusty's Hill carvings demonstrate familiarity with even minor details of the Pictish artistic tradition but are nevertheless not fully part of the mainstream. The carvings were probably made by a local Briton familiar with Pictish art but confident enough to create their own symbols. While the symbols appear to be well outside the main concentrations of symbol stones, it is worth mentioning that the transmission of symbols need not involve direct travel to the far north and east of Scotland. Indeed, portable high status metal objects from the Norrie's Law Hoard found in Fife and the Whitecleuch Silver Chain found in Lanarkshire contain broadly similar symbols to those found at Trusty's Hill. It has already been suggested that the metalworkers at Trusty's Hill had access to Anglian derived portable objects, and a similar connection to material culture from the north can certainly not be ruled out. Furthermore, comparisons can be drawn with the only two other Pictish inscribed stones known outside Pictland. While one of these, found in Princes Street Gardens, Edinburgh, was self-evidently not in situ, its location was at the foot of Edinburgh Castle Rock from which it almost certainly derived. The summit of Edinburgh Castle Rock has been confirmed by archaeological excavation as being a high status settlement during the early medieval period (Driscoll and Yeoman 1997, 43-45), corroborating the historical evidence that this was Din Eidyn, the royal stronghold of the Gododdin, the kingdom of the Britons of south east Scotland. The other Pictish carving known outside Pictland is located at Dunadd, the royal stronghold of the early Scots Kingdom of Dalriada. Dunadd is especially comparable with Trusty's Hill. The nucleated fort layout of Dunadd, with an upper citadel and lower precincts, is similar to Trusty's Hill. The nature of the material assemblage recovered from the 2012 excavation of Trusty's Hill is closely comparable with Dunadd. But perhaps most importantly, the association of a rock-cut basin and Pictish carvings within the entranceway to Trusty's Hill's summit is an apposite comparison. This is remarkably similar to the surrounding context of the Pictish carving at Dunadd, where the inauguration stone, on which the Pictish inscription of a boar is carved, is associated with a small rock-cut basin and located at the entranceway to the summit enclosure. If this is what marks out Dunadd as of royal predominance over other forts in Argyll, this may also mark out Trusty's Hill in the same way over other forts in Dumfries and Galloway.

Unlike other early medieval northern British kingdoms where the chief settlement is known (Dunadd for Dalriada, Din Eidyn for Goddodin, Dumbarton Rock for Strathclyde and Bamburgh for Bernicia), there is no corresponding historically attested 'capital' for the Solway region. The kingdom of Rheged was a historical political entity during the sixth and early seventh centuries AD. Its famous kings Urien and Owain appeared to have held sway over the Solway and into Cumbria, the Scottish Borders and north Northumberland. The chronology and history of Rheged, coupled with the firm archaeological evidence at Trusty's Hill, certainly marks this site as a strong contender as a royal centre from which Urien and Owain struck out. Indeed, it may have been memory of this lineage that brought about the severe destruction of the fort, possibly at the hands of Northumbrian conquerors. But the fragile environmental evidence from the rock cut-basin suggests that the conquest of local 'hearts and minds' was not successful.

The social memory of Trusty's Hill's story may have been kept alive in one form or another for many centuries after its destruction. This could have been cemented by the ruins of the fort, as well as by the unique Pictish carvings themselves. However, none of the early medieval oral history that likely developed around it has survived. While the carvings were powerful enough to invite votives to be left nearby during the later medieval period, the local nickname, the 'Deil's Specs', may be evidence for a more negative symbolism invoked during the post-medieval period. The negative views of the symbols and the fort during this post-reformation period may have broken centuries old traditions associated with Trusty's Hill.

Conclusions

Not only is it clear that Trusty's Hill was occupied between the fifth and seventh centuries AD and that the Pictish symbols carved at the site are genuine, but the archaeological context of the Pictish inscribed stone is closely comparable with Dunadd. This may imply that Trusty's Hill too was a royal stronghold of an early medieval kingdom in Scotland. The Pictish inscription, the evidence from the entranceway and the summit of Trusty's Hill points to ambitious inhabitants who very much saw themselves as intimately connected to political, social and economic powers that were being developed across northern Britain.

The kingdom of Rheged is remembered only in scant historical sources and early medieval poetry. Historians and antiquarians have long thought that Rheged existed somewhere in Cumbria, Lancashire or Dumfries and Galloway, although the firm archaeological evidence to support this was lacking. The discoveries from Trusty's Hill, along with the evidence from Whithorn, Mote of Mark, Kirkmadrine, Tynron Doon and perhaps Ardwall Island provides clear archaeological evidence for a hierarchical pattern of secular and ecclesiastical sites in Galloway between the fifth and early seventh centuries AD, which enjoyed far-flung contacts and trade with Gaul and the Byzantine Empire. The extent and quality of this evidence is unmatched elsewhere in southern Scotland and north west England, and corroborates the historical sources for a kingdom that was, albeit briefly, pre-eminent amongst the kingdoms of northern Britain during the late sixth century AD. From the evidence so far, Galloway and Trusty's Hill are emerging as the most likely backdrops from where powerful kings like Urien of Rheged and his son Owain 'Bane of the East', briefly dominated southern Scotland and northern England during the Dark Ages.

Acknowledgements

Access to the site and permission to excavate was kindly provided by Alexander McCulloch. Financial and in-kind support for the Galloway Picts Project was provided by the Heritage Lottery Fund, the Dumfriesshire and Galloway Natural History and Antiquarian Society, the Society of Antiquaries of Scotland, the Mouswald Trust, the Hunter Archaeological Trust, the Strathmartine Trust Sandeman Award, Gatehouse Development Initia-

tive, John Younger Trust, the Royal Commission on the Ancient and Historical Monuments of Scotland, Galloway Preservation Society and GUARD Archaeology Ltd. The archaeological fieldwork was undertaken by Alistair Livingston, Ron Forster, Kenny and Pat Wilson, Margaret and Andrew Shankland, David and Alison Steel, Alison Clark, John and Heather Clark, Brian Jones, Ronald Copeland, Rachel Yorke, Beverley Vaux, Grace Macpherson, Karen Campbell, Nigel Joslin, Glenis Vowles, Tony Brotherton, Heather Barrington, Francis and Eileen Toolis, Keith Hamblin, Henry and Laura Gough-Cooper, Sheila Honey, Gayle Reedman, Robert Gordon, Jeremy Brock, David Hannay, Cara Gillespie, Deirdre Carlisle, Vicki Dowdell, Elizabeth Ormerod, Mary Cousins, Douglas Snell, Sher-ee Buchanan, James Steel, Adia Bey, Vanda Tomeszova, Lukas Krejei, Margaret Lister, Cecilia Franklin, Aubrey Chatham, Ciorsten Campbell, Alistair Livingston (Snr), Macroy Spenser, Rhys Coffey, Barry Dale, Laurie Johnston and the Advanced Higher History pupils of Douglas Ewart High School. The excavation of Trench 2 was supervised by Iraia Arabolaza and Maureen Kilpatrick; Trench 4 by Beth Spence and Ronan Toolis; Trench 5 by Chris Bowles and Maureen Kilpatrick and Trench 6 by Scott Wilson. The GPS topographic survey was undertaken by John Sherriff, Ian Parker, Adam Welfare and George Geddes of RCAHMS. Laser scanning was undertaken by Colin Muir and Alan Simpson of CDDV. The removal and reinstatement of the iron cage protecting the Pictish carvings was undertaken by James Boam. The post-excavation wet sieving and sorting of samples was undertaken by Scott Wilson, Beth Spence and Aileen Maule of GUARD Archaeology. Analysis of the soil thin section micro-morphology was undertaken by Laura Hamlet of Stirling Analyses for GeoArchaeology at Stirling University. Archaeo-botanical analysis was undertaken by Susan Ramsay. Bayesian analysis of the radiocarbon dates was undertaken by Derek Hamilton of SUERC. Analysis of the lithics was undertaken by Torben Ballin. Analysis of the worked stone was undertaken by Beverley Ballin Smith. Analysis of the ceramics was undertaken by Ewan Campbell of the University of Glasgow. Analysis of the faunal assemblage was undertaken by Karen Deighton. Analysis of the laser scan survey results was undertaken by Katherine Forsyth and Cynthia Thickpenny of the University of Glasgow. Conservation of the metalwork was undertaken by Will Murray of the Scottish Conservation Studio. Analysis of the metalwork was undertaken by Gemma Cruickshanks, Alice Blackwell and Fraser Hunter of the National Museums of Scotland. Isotope analysis of the lead strip was undertaken by Vanessa Pashley and Jane Evans of NIGL. Residue analysis of the E-ware sherd was undertaken by Ben Stern of Bradford University. The illustrations were prepared by Gillian McSwan and Fiona Jackson. Technical and logistical support was provided by Aileen Maule, Bob Will, John Kiely, Jen Cochrane and Joan O'Donnell of GUARD Archaeology. Advice and support for the project was received from Ewan Campbell, Ian Ralston, Charles Thomas, Francis Toolis, David Steel, John Williams, Michael Cook, Ken Smyth, David Devereux, John Atkinson, Pauline Macshannon, Robin Turner, Lyn Wilson, John Pickin, Jane Brann, Andrew Nicholson, Gordon Cook, John Malcolm, Alistair Robertson, Pauline Megson and Noel Fojut. The excavation was directed by Ronan Toolis and Chris Bowles.

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**Appendix D: *The Lost Dark Age Kingdom of Rheged.*
The Discovery of a Royal stronghold at Trusty's Hill,
*Galloway***

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THE LOST DARK AGE KINGDOM OF RHEGED

The Discovery of a Royal Stronghold at Trusty's Hill, Galloway

Ronan Toolis and Christopher Bowles

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Published in the United Kingdom in 2017 by
OXBOW BOOKS
The Old Music Hall, 106–108 Cowley Road, Oxford OX4 1JE

and in the United States by
OXBOW BOOKS
1950 Lawrence Road, Havertown, PA 19083

© Oxbow Books and the individual authors 2017

Hardcover Edition: ISBN 978-1-78570-311-9
Digital Edition: ISBN 978-1-78570-312-6

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Printed in Malta by Melita Press Ltd
Typeset in the UK by Frabjous Books

The publishers would like to thank the Dumfriesshire & Galloway Natural History & Antiquarian Society and Environment Scotland for the provision of grants towards the cost of publishing this book.

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This book is dedicated to the memory of Charles Thomas

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Acknowledgements

The success of the Galloway Picts Project was due to the contributions of a significant number of people. Access to the site and permission to excavate was kindly provided by Alexander McCulloch. Financial and in-kind support for the Galloway Picts Project was generously provided by the Heritage Lottery Fund, the Dumfriesshire and Galloway Natural History and Antiquarian Society, the Society of Antiquaries of Scotland, the Mouswald Trust, the Hunter Archaeological Trust, the Strathmartine Trust Sandeman Award, the Gatehouse Development Initiative, the John Younger Trust, the Galloway Preservation Society, the Royal Commission on the Ancient and Historical Monuments of Scotland, Historic Scotland and GUARD Archaeology Ltd. The archaeological excavation was undertaken by Alistair Livingston, Ron Forster, Kenny and Pat Wilson, Margaret and Andrew Shankland, David and Alison Steel, Alison Clark, John and Heather Clark, Brian Jones, Ronald Copeland, Rachel Yorke, Beverley Vaux, Grace Macpherson, Karen Campbell, Nigel Joslin, Glenis Vowles, Tony Brotherton, Heather Barrington, Francis and Eileen Toolis, Keith Hamblin, Henry and Laura Gough-Cooper, Sheila Honey, Gayle Reedman, Robert Gordon, Jeremy Brock, David Hannay, Cara Gillespie, Deirdre Carlisle, Vicki Dowdell, Elizabeth Ormerod, Mary Cousins, Douglas Snell, Sheree Buchanan, James Steel, Adia Bey, Vanda Tomeszoza, Lukas Krejei, Margaret Lister, Cecilia Franklin, Aubrey Chatham, Ciorsten Campbell, Alistair Livingston (Snr), Macroy Spenser, Rhys Coffey, Barry Dale, and Laurie Johnston and the Advanced Higher History pupils of Douglas Ewart High School.

Advice on the application for Scheduled Monument Consent to undertake the archaeological fieldwork was gratefully received from John Malcolm, Alistair Robertson, Pauline Megson and Noel Fojut of Historic Scotland. Further advice and support for the project was appreciatively received from Charles Thomas, Ewan Campbell, Ian Ralston, Francis Toolis, David Steel, John Williams, Michael Cook, John Atkinson, Pauline Macshannon, Warren Bailie, Robin Turner, John Sherriff, John Boreland, Neil Fraser, Lyn Wilson, Ken Smyth, David Devereux, John Pickin, Jane

Brann, Andrew Nicholson, Simon Gilmour, Rebecca Jones, Rod McCullagh, Lisa Brown, Gordon Noble, Julie Gardiner and members of the council of the Dumfriesshire and Galloway Natural History and Antiquarian Society.

The GPS topographic survey was undertaken by John Sherriff, Ian Parker, Adam Welfare and George Geddes of the Royal Commission on the Ancient and Historical Monuments of Scotland. Laser scanning was undertaken by Colin Muir and Alan Simpson of the Centre for Digital Documentation and Visualisation LLP (a partnership between Historic Scotland and the Glasgow School of Art). The excavation of Trench 2 was supervised by Iraia Arabaolaza and Maureen Kilpatrick, Trench 4 by Beth Spence and Ronan Toolis, Trench 5 by Chris Bowles and Maureen Kilpatrick and Trench 6 and sieving by Scott Wilson. The removal and reinstatement of the iron cage protecting the Pictish Carvings was undertaken by James Boam. The post-excavation wet sieving and sorting of samples was undertaken by Scott Wilson, Beth Spence and Aileen Maule of GUARD Archaeology. Technical and logistical support was provided by Aileen Maule, Bob Will, John Kiely, Jen Cochrane and Joan O'Donnell of GUARD Archaeology. Illustrations were prepared by Gillian McSwan and Fiona Jackson of GUARD Archaeology. The excavation was directed by Ronan Toolis and Chris Bowles.

Laura Hamlet gratefully acknowledges the advice of George MacLeod and Clare Wilson of the University of Stirling, Jennifer Brown of the University of Glasgow and Clare Ellis of Argyll Archaeology, during the preparation of her soil micromorphology analysis.

Katherine Forsyth and Cynthia Thickpenny are most grateful to Meggen Gondek for information about the Rhynie pin in advance of full publication; to Ross Trench-Jellicoe for his penetrating and insightful comments on an earlier draft and for making available unpublished papers on Glencairn and Eggerness; to Ewan Campbell for advice on geology, for detailed comments on a draft and for making available his unpublished paper on Tirefour; and to Stephen Driscoll for continuing support and advice.

Introduction

Trusty's Hill Fort rests on the summit of a craggy knoll within the Boreland Hills, in the Stewartry district of Dumfries and Galloway (NX 5889 5601). The site lies in the parish of Anwoth, approximately 1 km south-west of the centre of Gatehouse of Fleet (Fig. 1.1). It is a key heritage asset of the Fleet Valley National Scenic Area. At a height of 72 m OD this is not the most prominent summit of the Boreland Hills, an area of small hillocks covered in scrub and rough grazing for cattle and sheep (Fig. 1.1). However, it affords wide views over the Fleet valley. Higher peaks of the Boreland hills rise to the south-west partially blocking the view of the Fleet Bay.

The fort is defined by a vitrified rampart around the summit of the hill, enclosing an area of 0.0437 ha, with an outer bank and rock-cut ditch on its northern side and a series of lesser outer ramparts on its southern side. It is particularly conspicuous amongst the hillforts of Galloway for the pair of Pictish symbols, comprising a double disc and Z-rod, and a sea-monster and sword, carved on an exposed face of greywacke bedrock at the entrance to the fort. These symbols, their unique character and their location in south-western Scotland have long puzzled scholars.

The site is first mentioned in the Anwoth parish entry in the Statistical Account of Scotland as 'one of those vitrified forts which have lately excited the curiosity of modern antiquaries' (Gordon 1794, 351). It was observed that the summit of this steep rock was 'nearly surrounded with an irregular ridge of loose stones, intermixed with vast quantities of vitrified matter' and that 'on the south side of this fort there is a broad flat stone, inscribed with several waving and spiral lines, which exhibit however no regular figure' and 'near it likewise were lately found several silver coins; one of King Edward VI; the rest of Queen Elizabeth' (*ibid.*). The site was again noted just over 50 years later in the New Statistical Account of Scotland, but with no further information (Johnstone 1845, 378).

The first written reference to the place-name of Trusty's Hill was given in the Ordnance Survey Name Book for Kirkcudbrightshire (Ordnance Survey 1848, 26). The surveyor verified the name through four local residents and recounts an interesting story about the origins of the name. The surveyor states that 'formerly there had been a house at the base of the hill which had been occupied by a man named Carson who had married one of the minister's servants, which servant the minister had always styled her as his Trusty Servant, from whom it is said the hill took its name' (*ibid.*). The Name Book also states that the hill, which was on the farm of Boreland, had originally been called the 'Cairn of Borland', though the surveyor makes no mention of a cairn, simply adding that 'on its summit is the vitrified fort' (*ibid.*). Unfortunately, available mapping evidence from the late sixteenth century to the middle of the nineteenth century shows neither Cairn of Borland or a cottage in the vicinity of Trusty's Hill and so it is difficult to verify this story.

The first survey of the site was undertaken in 1848 by the Ordnance Survey for the First Edition 6-inch map, published in 1854 (Fig. 1.2). However, while the basic shape of the fort is recognisably correct, much of the finer detail is missing. The subsequent Second Edition plan of the site produced by the Ordnance Survey in the 1890s is even less detailed, the surveyors appearing to have abandoned the premise of a small hilltop citadel in favour of a larger oval enclosure. This depiction ignores many of the topographical and archaeological features present (Fig. 1.3).

The carved symbols were first drawn by John Stuart (Fig. 1.4), who also recorded that the site went by the name of Trusty's Hill (1856, 31). Stuart doubted whether the horned head at the bottom was nothing but a more recent addition to the other carvings (*ibid.*).

The first detailed plan of the site (Fig. 1.5) was in fact made around the same time as the Ordnance Survey Second Edition map in the 1890s by Frederick



Fig. 1.1. Site Location

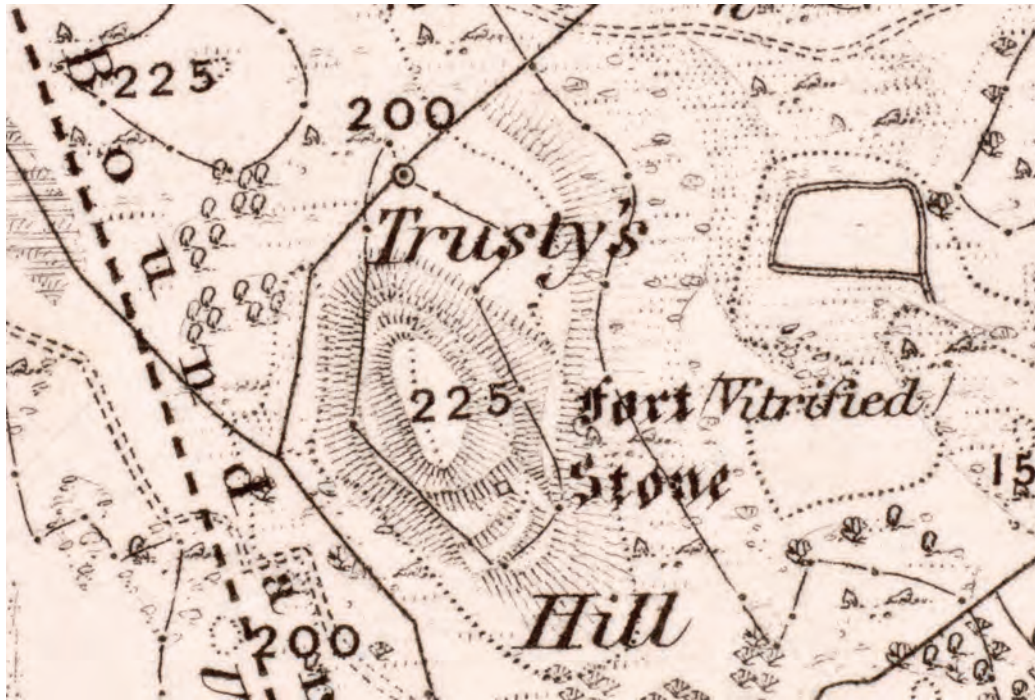


Fig. 1.2. Ordnance Survey First Edition 6-inch (1:10,560 scale) 1854 map. © Courtesy of RCAHMS (Ordnance Survey Historical Maps). Licensor www.rcahms.gov.uk



Fig. 1.3. Ordnance Survey (1:2500 scale) 1896 map. © Courtesy of RCAHMS (Ordnance Survey Historical Maps). Licensor www.rcahms.gov.uk

Coles, who recorded un-mortared stonework around the summit but noted that according to 'accurate observers' the walls were regular and compact, and exhibited vitrification 40 or 50 years previously (1893, 173–4). The style of Coles's depiction contrasts with

that used by the Ordnance Survey but it reflects the archaeological features and the craggy, broken topography of the site somewhat better.

Of most interest to Coles were the 'Dolphin' and 'Sceptre and Spectacle Ornament' carvings. He



Fig. 1.4. Stuart's 1856 depiction of the Pictish Symbols at Trusty's Hill. © Courtesy of RCAHMS. Licensors www.rcahms.gov.uk

concurred with Stuart in dismissing the lowest figure as of recent origin (Coles 1893, 174). Coles also noted that he could not find cup and ring marks said to be near this sculpturing. Interestingly, he suggested that the antiquity of the name Trusty's Hill could be dismissed as the invention of a certain Allan Kowen, who 50 years before, according to local testimony, had rented a small croft near the foot of the hill and founded the legend about 'Trusty' (*ibid.*). While this statement suggests a slightly different albeit modern origin to the name from that recounted in the 1848 Ordnance Survey Name Book, by the 1890s the fame of the inscribed stone and the fort may have led to the invention of a local mythology which was not apparent earlier in the century. Certainly much of the graffiti exhibited on the stone (see Fig. 1.12) appears to be nineteenth century in date and points to the site having been something of a local attraction.

The Pictish symbols at Trusty's Hill were included a short time later in John Romilly Allen and Joseph Anderson's survey of Early Christian Monuments in Scotland (1903, 477–78; Fig 1.6), who classified the z-rod and double disc symbol and dolphin symbol as Class I (1903, 92). They were the first to note the protective cage of iron bars over the carvings (1903, 478). The first RCAHMS survey largely repeated Allen and Anderson's description and typology a few years later (1914, 15).

Although the Ordnance Survey and Frederick Coles had identified 'Trusty's Hill' to be a nineteenth century invention, local writers continued to attribute a legendary association of the site with King Drust

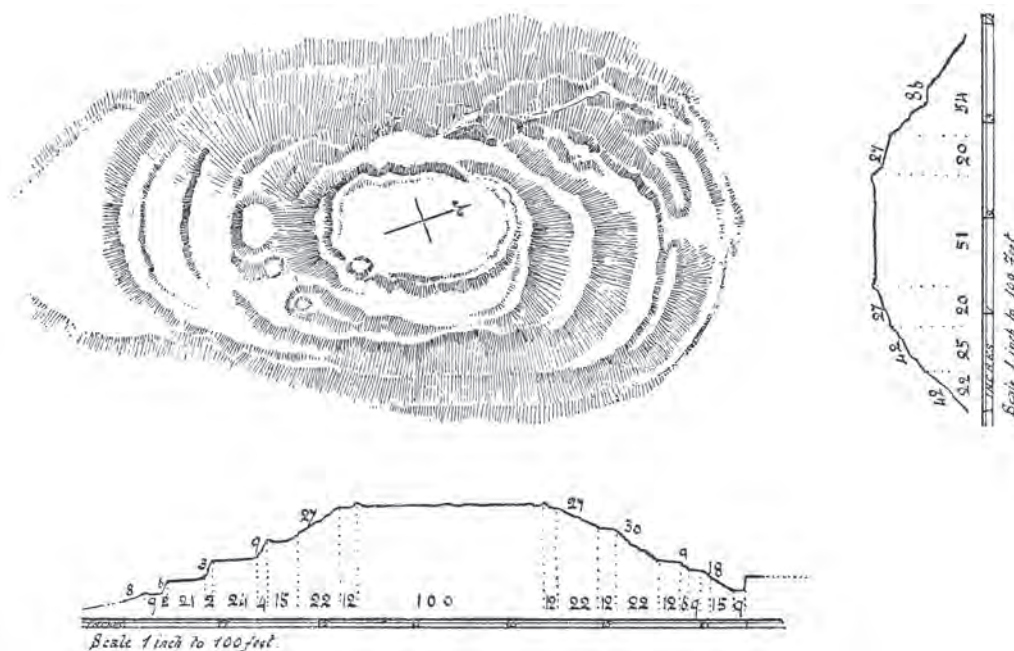


Fig. 1.5. Coles' 1893 Plan of Trusty's Hill. We are grateful to the Society of Antiquaries of Scotland for permission to reproduce this illustration

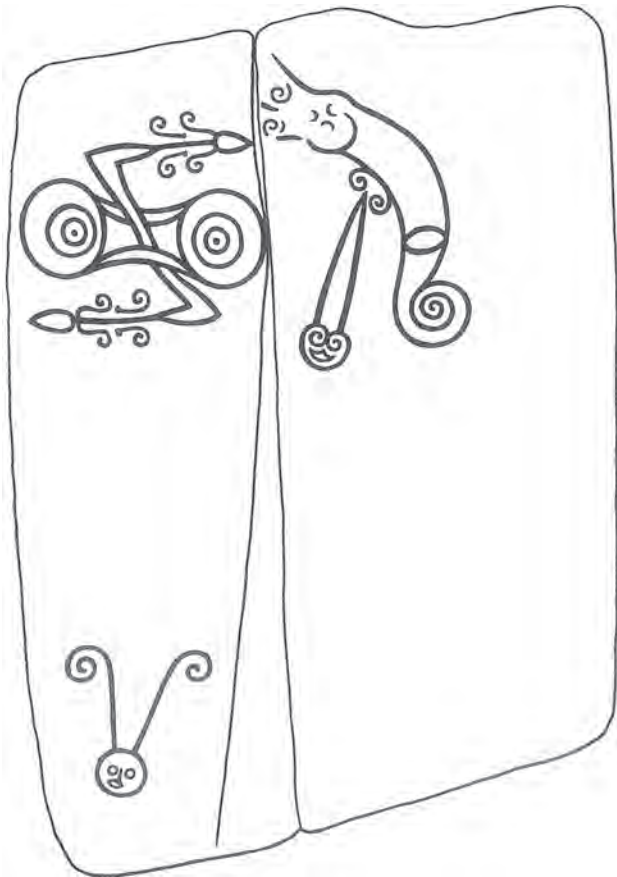


Fig. 1.6. Allen and Anderson's 1903 depiction of the Pictish Symbols at Trusty's Hill. We are grateful to the Society of Antiquaries of Scotland for permission to reproduce this illustration

well into the twentieth century (Maxwell 1930, 262). The story of Trusty's Hill had clearly kept pace with a growing awareness and romanticism of the Picts, their historical figures and their symbols across Scotland in the late nineteenth and early twentieth centuries. This also fed into a wider narrative about of the 'Picts of Galloway' with the symbols being perceived as a physical link to this mythologised past.

The first archaeologist to examine the Trusty's Hill symbols was C. A. Raleigh Radford. Radford considered the horned head to have been retouched in modern times but thought the form to be of genuine antiquity (1953, 237). He compared the similar relationship of the Pictish symbols at Trusty's Hill to two other non-Pictish forts, Dunadd in Argyll and Edinburgh Castle Rock, which either contain or lie in proximity to Pictish symbols. Based on the reference in the twelfth century *Life of St Kentigern* by Jocelyn of Furness to a stone erected to mark the spot where King Leudon fell, Raleigh Radford postulated that these carvings commemorated Pictish leaders who had fallen in attacks on these fortresses (1953, 238). Radford classed the symbols as Class II,

and considered them late seventh or early eighth century AD by analogy with likely Pictish raids in southern Scotland in the decades following the battle of Nechtansmere (1953, 239).

The first excavation of Trusty's Hill was directed by Charles Thomas in 1960 (1961, 58–70). Charles Thomas's interest in the site was encouraged by R. C. Reid (Thomas *pers. comm.*), then one of the editors of the *Transactions of the Dumfriesshire and Galloway Natural History and Antiquarian Society*, who had long advocated its excavation (1952, 163–64). Thomas's team excavated seven trenches, including two within the summit of the hill, and surveyed a new plan of the site showing the excavation trenches (Fig. 1.7). The easternmost of these trenches, Trench 4, yielded a substantial amount of animal bones, from cattle, sheep and pigs, and charcoal from a dark occupation layer said to be 3–6 in (76–152 mm) deep (Thomas 1961, 63). The lower half of a granite rotary quern was found buried face down bedded in this occupation layer, which overlay a thin dark skin of old turf that itself covered bedrock an average of 18 in (457 mm) below the ground surface (*ibid.*). Sizeable blocks of flattish stone were also recorded across the western side of Trench 4 towards the interior of the summit enclosure. While none of these appeared to be *in situ*, the occupation layer seemingly respected their eastern edge. This edge was also sealed by the rubble of the collapsed rampart along the eastern side of the site which had fallen both inwards into the enclosure and outwards down the slope of the hill (Thomas 1961, 63–4; Fig. 1.8). Vitrification of the internal rampart core was revealed, particularly along its interior side, and a considerable amount of modern disturbance to the rampart was also noted here. Thomas noted that in this area the rampart had been truncated and overlain by a small collapsed structure constructed from stone robbed from the rampart (*ibid.*).

Thomas's excavation of Trench 5, on the opposite western side of the summit, revealed the apparent basal course of a stone wall about 4 ft (1.22 m) in width that had collapsed outwards and down the western flank of the hill (1961, 63). A small cutting, Trench 7, was opened across a small platform on the north-western flank of the hill but revealed only a narrow collapsed wall and a thin layer of turf overlying bedrock (Thomas 1961, 64). Very little else of the interior was exposed as unrecorded sondages apparently revealed only bedrock (*ibid.*).

In addition to the vitrified ramparts, Thomas revealed another key feature, a waterlogged rock-cut depression lined with dry stone masonry symbols (Thomas 1961, 65–6; Fig. 1.9). This was located directly to the east of the entranceway, out with the summit rampart and opposite the Pictish inscribed outcrop. Thomas removed rubble and vitrified stone collapse from the summit rampart above to a depth of 3 ft

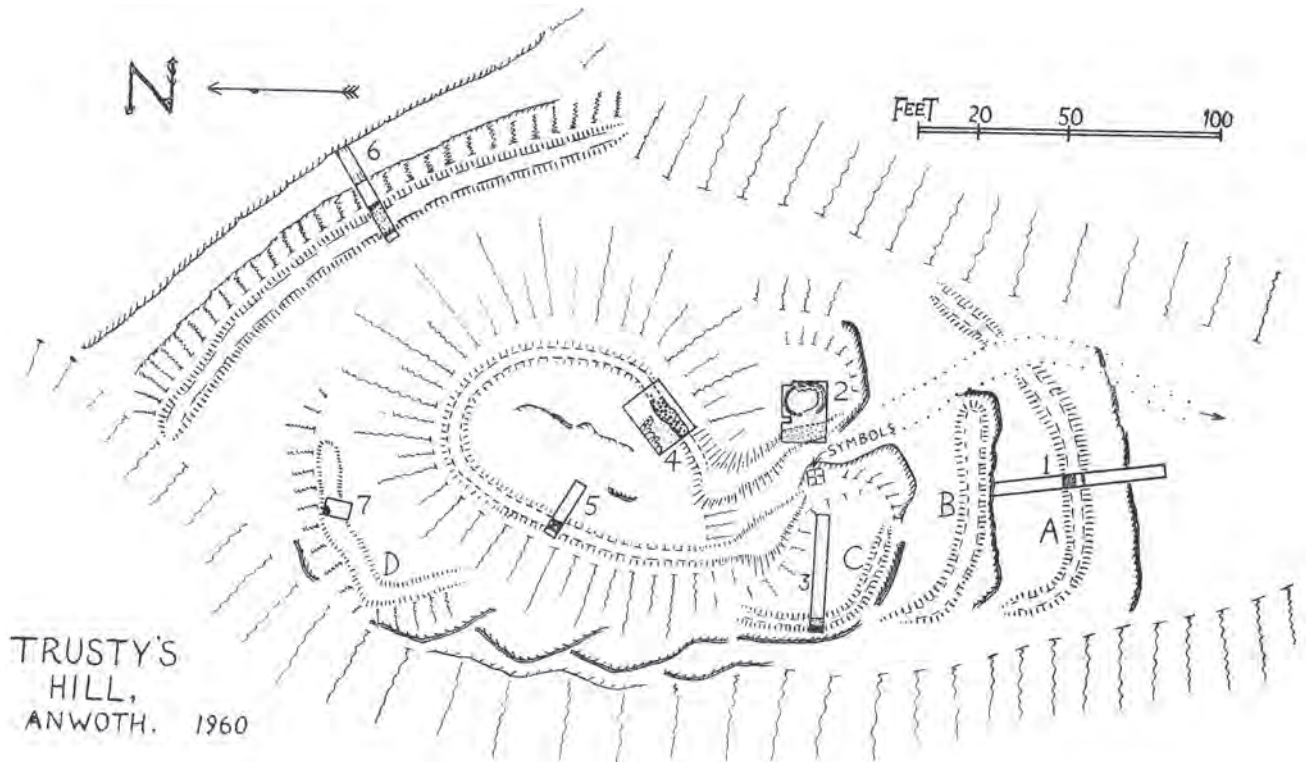


Fig. 1.7. Thomas's 1960 plan of Trusty's Hill. © DGNHAS

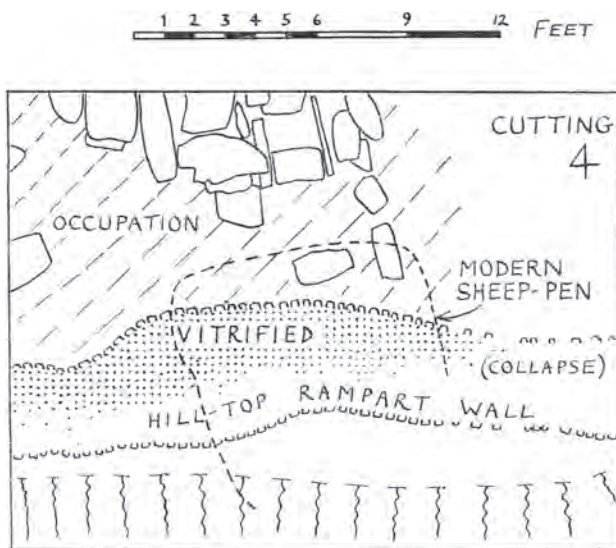


Fig. 1.8. Thomas's plan of Trench 4. © DGNHAS

(0.91 m) before water seeped in rapidly, confirming that this feature was a focus of surface drainage (*ibid.*). Large granite boulders were exposed on a bedrock ledge immediately adjacent to the depression on the south side, and a further 3 ft (0.91 m) was excavated beyond this nearly to bedrock (Thomas 1961, 66). On the basis of this evidence, Thomas speculated that the feature was the remains of a small oval 'guard hut', measuring 9 × 11 ft (c. 2.74 × 3.35 m), with its southern

and eastern walls founded on a course of granite boulders wedged into natural shelves of bedrock (*ibid.*). Thomas suggested that the foundations of the building lay approximately one foot above the original floor level in effect making this a sunken floored building (*ibid.*). The western side of this oval space was deemed to be the doorway but this was not clearly defined. A bank of stones emanating from the summit entrance as an out-turned stub bank blocked the possible doorway space entirely. The northern side of the supposed hut, cut into the hill slope, was defined by courses of flat stones arranged to form a semi-circular inner face almost four feet high. Thomas noted that due to rapid water ingress the floor of this oval space was reduced to a 'soupy mud', and while charcoal was noted, no artefacts were recovered.

Another cutting, Trench 3, was opened across a platform to the west of the entranceway on the other side of the Pictish inscribed outcrop from the 'guard hut', but Thomas was unable to penetrate the mass of rubble and vitrified stone that had collapsed on to it from the rampart above (Thomas 1961, 65). However, this trench did confirm that the bank that defined the western and southern edge of the platform comprised a mass of rubble and earth piled behind an outer revetment of dry stone with no inner revetting face.

Trench 1 examined the lowest lying of Trusty's Hill's enclosed areas on the southern side of the summit. This trench revealed that the lowest and southernmost step was natural and that to the north

of this, the outermost of the ramparts comprised a shallow bank some 2 ft (0.61 m) high and 4 ft (1.22 m) across with an outer stone revetment and rubble core and resting on a natural rock shelf (Thomas 1961, 61). The shelf to the north was enclosed by this bank and had apparently been stripped of topsoil when the ramparts were constructed (Thomas 1961, 62; Fig. 1.10). It yielded no artefacts or structural remains but only charcoal fragments. The rock shelf was overlain by the collapsed rubble from the rampart of the adjacent enclosure to the north.

On the opposite north-eastern side of the hill, Trench 6 exposed a section across a rock-cut ditch,

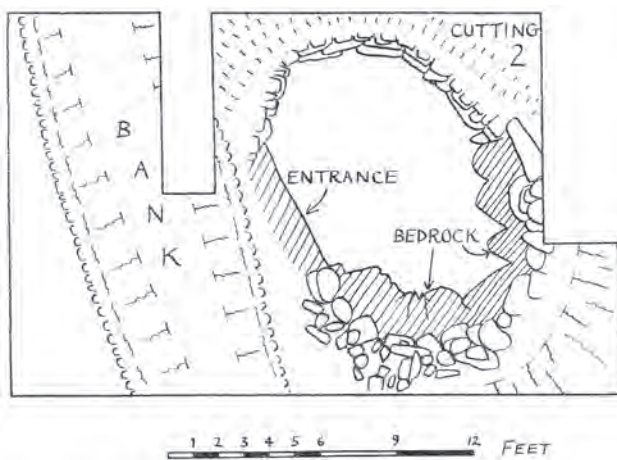


Fig. 1.9. Thomas's plan of Trench 2. © DGNHAS

8 ft (2.44 m) deep and 10 ft (3.05 m) across. Above the inner face of the ditch was a substantial rubble and earth bank, nearly 10 ft (3.05 m) wide, with inner and outer stone revetments. The primary fill of the rock-cut ditch was a large wedge of silt on the inner side, sealed by a secondary fill of stony rubble collapse from the inner rampart (Thomas 1961, 62–3; Fig. 1.10). No artefacts were recovered from either of these ditch fills.

At the end of a rain-soaked fortnight, Thomas's seven trenches were backfilled, though the 'guard hut' was partially reconstructed along its northern side to a height of 6 ft (1.83 m); half-pennies being bonded at the junction of the old and new walling (Thomas 1961, 70).

Thomas's excavations did not recover any precise dating evidence; the only artefacts recorded being the lower half of a rotary quern, flint flakes and several beach pebbles from the interior. These finds would be consistent with occupation at any time between the second century BC and the early medieval period. None of the animal bones or charcoal were collected for further analysis.

Despite the paucity of material culture, Thomas interpreted two widely separate phases of occupation on the site. The first phase was attributed to the first century AD. Thomas concluded that in this phase the rampart enclosing the summit was constructed along with the 'guard-hut' and the rock-cut ditch to the north (Thomas 1961, 66–7). In the second phase the occupants built the outer ramparts on

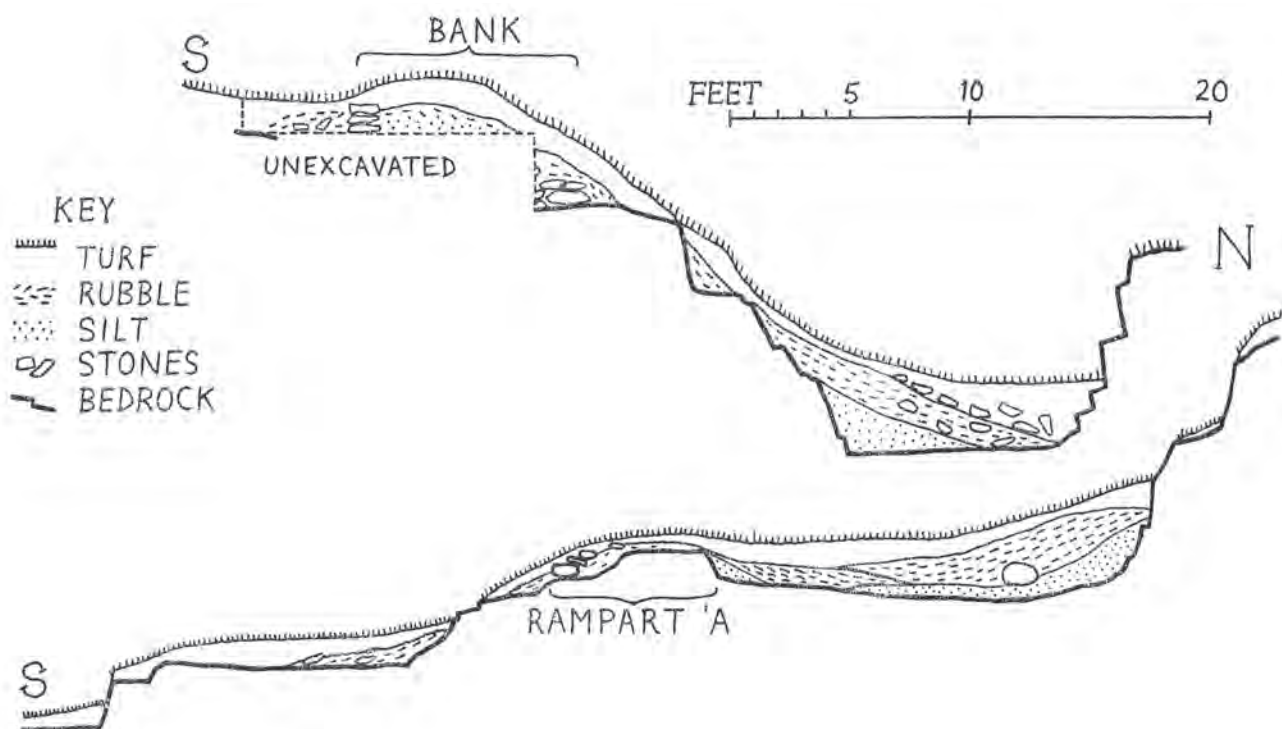


Fig. 1.10. Thomas' Sections of the north-eastern rock-cut ditch and southernmost outer rampart. © DGNHAS

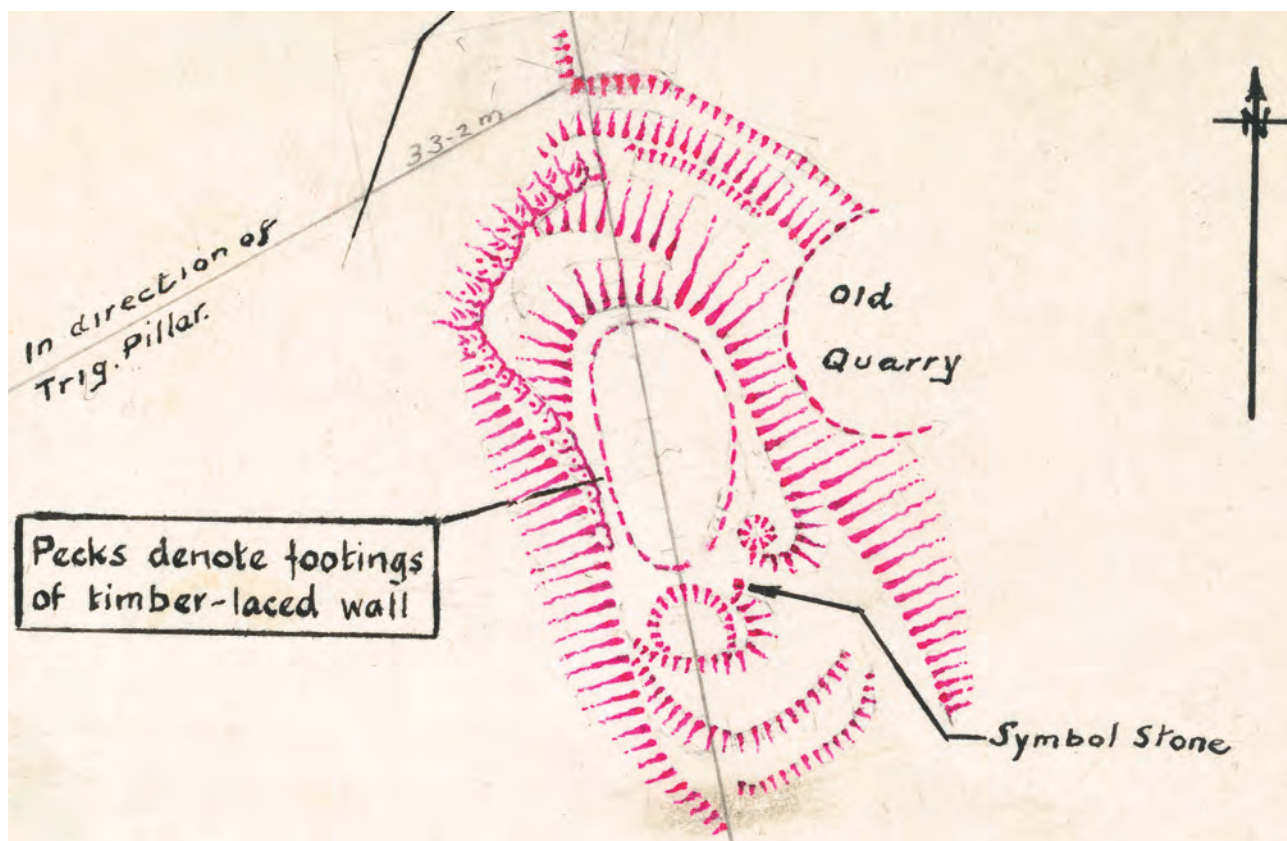


Fig. 1.11. Ordnance Survey (1:2500 scale) 1970 map. © Courtesy of RCAHMS (Ordnance Survey). Licensors www.rcahms.gov.uk

the southern flank of the summit, the extension of the entranceway and possibly the small bank on the north-western slope (Fig. 1.7). Thomas ascribed this phase to the post-Roman period and drew analogies with nuclear or nucleated forts such as Dunadd and Dalmahoy (1961, 67–8). This second and final phase apparently ended with the burning of lean-to buildings in the interior of the summit enclosure and the consequent vitrification of an already partially ruined timber-laced stone rampart around the summit (Thomas 1961, 67–9). Thomas concurred with Raleigh Radford in attributing the carvings at the entrance as commemorating a fallen Pictish leader responsible for the fort's fiery demise (*ibid.*, 60). However, contrary to Raleigh Radford he considered the Pictish symbols to be Class I, late sixth or early seventh century AD, based on the apparent improbability of Pictish raiders coming so far south post-Nechtansmere (ie after AD 685). Thomas also postulated that the excessive floriation of the z-rod and the insertion of its central portion between the bars of the double disc's 'waist' was closer to AD 600 than 500 (1961, 68–9).

Perhaps, given the lack of conclusive dating evidence from Thomas's excavation, subsequent discussions of the site focused not on the archaeological context

of the symbols but instead on art historical stylistic comparisons between Trusty's Hill's inscriptions and other Pictish symbols. The art historical discussion led to a new wave of dismissal of the significance of the Trusty's Hill inscription and a marginalisation of the site itself. For instance, Isabel Henderson, in dismissing early Pictish occupation of Galloway, considered the Pictish symbols at Trusty's Hill to be a late Class II 'perversion' (1960, 50) based on stylistic comparisons of Pictish symbols. In part using the symbols at Trusty's Hill, Henderson elaborated upon the principle of the 'declining symbol', which recognised a 'correct' form for each symbol and that this was in the main represented by the earliest examples with later versions declining in form (1967, 112–14). As the symbols at Trusty's Hill were considered, according to this principle, to be late in the sequence, Henderson surmised that they must have been carved at an otherwise unspecified period 'when we know there was no Pictish settlement in Galloway' (1967, 114). Using this rationale, Henderson concluded that the carvings could be 'safely dismissed as an outlier'.

Mirroring Henderson, Wainwright, in his arguments against Pictland stretching south of the Forth-Clyde, also considered the Pictish symbols at

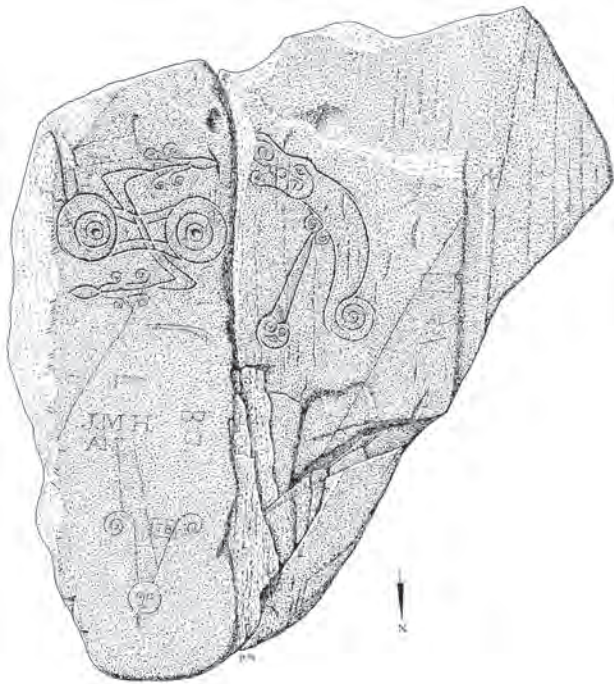


Fig. 1.12. RCAHMS Survey of inscribed symbols at Trusty's Hill. © Crown Copyright: RCAHMS. Licensor www.rcahms.gov.uk

Trusty's Hill, like those at Edinburgh, to be strays out with the main distribution of Pictish Stones (1980, 36–44). Anthony Jackson went even further, dismissing the carvings at Trusty's Hill, as well as at many other sites, as dubious owing to their uncommon symbols (1984, 37). Richard Oram, in his argument against Pictish settlement in Galloway, accepted that the Pictish authenticity of the carvings was open to question and refused to discount the possibility that they are relatively modern forgeries (1993, 15). He noted that Thomas's excavations at Trusty's Hill, and indeed any other excavations in Galloway, had failed to produce evidence for a Pictish population (1993, 16–17).

Craig Cessford, on the other hand, while pointing out that the raiding party theory behind the carving of Pictish symbols at Trusty's Hill had attained the status of a 'factoid', and thus considered a variety of other explanations, nevertheless concluded that this theory was still the most likely (1994, 81–6). However, given the evidence for cross-cultural exchange, such as the use of Pictish symbols at the royal Scottish stronghold of Dunadd and the adoption of Pictish symbols in the British silver chain from Whitecleuch in South Lanarkshire, he accepted that it was eminently possible that such cultural interaction may have happened at Trusty's Hill too (1994, 82–3).

More recently, discussion began to return to the possible validity of the symbols and thus their

historical if not archaeological context. Lloyd Laing observed that, since the symbols appeared to have been cut at the same time, if the Pictish symbols at Trusty's Hill were a forgery as postulated by Oram and Jackson they must have pre-dated Stuart's drawing in the mid-nineteenth century by some duration for him to have considered them genuine (2000, 10). Laing commented that this would project any forgery to a period when interest in Pictish symbols was virtually non-existent, but he accepted that though the carvings should be seen as ancient, whether they were Pictish or not, was another matter (*ibid.*). He accepted the argument that Pictish symbols must be found in pairs to be true, and that the double disc and z-rod at Trusty's Hill comprised one symbol, not a pair. He pointed out that the Trusty's Hill 'beast' is similar to a 'hippocamp' on a Class II stone at Brodie in Elgin and that hippocamps do not belong to the Pictish repertoire. Ultimately, Laing rejected the sword and symbols at Trusty's Hill as being genuinely Pictish. Laing considered the style of the z-rod, as it was woven through the double disc instead of crossing it as is the case on Class I stones, to be Class II. He argued that, apart from the horned head and sword which might be Iron Age, the other symbols at Trusty's Hill were *inspired* by relief carvings on a Class II monument and that they were executed by someone who had seen Class II Pictish Stones but had not remembered them correctly (2000, 11). As he considered it unlikely that Class II stones pre-date the mid-eighth century, and that the majority are ninth century, Laing rejected the explanation of a Pictish raiding party for the carvings at Trusty's Hill, preferring instead that the symbols commemorated a marriage between a Pict and a Galloway, perhaps Anglian, noble.

Despite this renewed interest in the carvings at Trusty's Hill, little new fieldwork was carried out after Thomas's excavations in 1960. The most recent non-digital Ordnance Survey plan of the fort was produced in 1970 which accurately reflected the archaeology, albeit at a mapping scale. Perhaps most importantly, the Ordnance Survey were the first to recognise that the east end of the rock-cut ditch at the north side of the site had been truncated by quarrying (Fig. 1.11). More recently, a new digital survey of the Pictish Inscription at Trusty's Hill was produced for the RCAHMS in the early 2000s (Fraser 2008, 64–5). This apparently revealed previously unnoticed ogham along the southern, left hand edge of the exposed outcrop face (Fig. 1.12). The relatively low resolution of the survey results, perhaps hampered by the iron cage that protects the stone, meant that the newly discovered Ogham inscription could not be translated (John Boreland *pers. comm.*; Katherine Forsyth *pers. comm.*). Nonetheless, it appeared to mirror the combination of Gaelic ogham with Pictish

symbols at sites in north-east Scotland, such as Kirriemuir and St Vigean (Fraser 2008, 7, 64–5) and the Brodie Stone in Elgin, which, as noted by Laing above, already contained similarities to one of the symbols at Trusty's Hill (2000, 10). The combination of Pictish and ogham inscriptions at Dunadd provided another interesting parallel (Lane & Campbell 2000, 19).

However, none of the interpretations drawn above, or the limited archaeological fieldwork, appeared entirely satisfactory either in terms of establishing a credible date, function and authenticity of the Pictish symbols at Trusty's Hill in particular, or the date, nature, status and cessation of the settlement as a whole. Upon review, it was increasingly apparent to the authors that previous discussions of Trusty's Hill had largely been based on supposition and that there was very little actual evidence for the occupation of Trusty's Hill or the archaeological context this might provide for the carved symbols.

While a vitrified rampart around the summit was confirmed as far back as the nineteenth century, and Thomas revealed limited occupation evidence in 1960, nothing apart from the Pictish symbols could date the occupation of the fort; demonstrate the status of its inhabitants; or explicitly link the occupation of the fort with the Pictish inscription. This was in no small part due to the atrocious weather conditions that Thomas's team had to endure over the entire duration of the 1960 excavation, and the very limited resources he had (Thomas *pers. comm.*). Yet Thomas's excavations yielded tantalising fragments of significant archaeology potentially related to cultural practices. For instance, the waterlogged 'guard-hut' exposed near the entranceway, appeared, from Thomas's own description, to have been a rock-cut basin that acted as a focus for surface drainage (Thomas 1961, 66). If it was created for this purpose, it is reminiscent of the rock-cut well at Burghead in Aberdeenshire, which was also on the periphery of a fort and associated with Pictish inscribed symbols (Feachem 1977, 139). Thomas's confirmation of the vitrification at the core of the rampart surrounding the summit is also significant, demonstrating a scale of destruction that required a substantial magnitude of resources and could provide dateable evidence for the site's demise. Such hypotheses, the authors felt, were testable through new excavation.

In the absence of firm archaeological evidence the Pictish symbols at Trusty's Hill have largely been discussed only in terms of historical and stylistic analogy. Because these discussions have also sought to dismiss any Pictish association with

Galloway, the archaeological authenticity and context of the symbols has often been questioned while the grasp of supportive archaeological evidence has at times been weak (*e.g.* Oram 1993, 16–17). While it is clearly evident that the Pictish carvings at Trusty's Hill, along with the other 'strays' south and west of the Forth (Wainwright 1980, 30) are well outside Pictland, this does not negate any archaeological significance to these symbols. Indeed, as a unique occurrence in Galloway, the inscription at Trusty's Hill is all the more puzzling and relevant to understanding cross-cultural interaction in early medieval Scotland. Recent scholarship suggests that Pictish, Ogham and Latin inscribed stones all belong to the same insular epigraphic pattern and that these are monuments, not documents, which must be understood in their own right (Forsyth 2010). In the view of the authors, the perception that these symbolic monuments represented statements of cultural aspiration highlighted the need to better understand the archaeological context of the Pictish symbols at Trusty's Hill. This also fitted with a key research theme, that of establishing the complex cultural interactions behind the creation of the Scottish Kingdom, emerging from Scottish Archaeological Research Framework panel discussions at the time (Sanders 2011, 9). Within this broad theme, personal and group identity and how this manifested itself in material culture, is recognised as an important research topic.

Given the role the Dumfriesshire and Galloway Natural History and Antiquarian Society played in encouraging Charles Thomas to undertake his excavations in 1960, the Society decided to mark its 150th anniversary in 2012 by launching the Galloway Picts Project, a new programme of survey and excavation at Trusty's Hill. Despite its name, which was never intended as anything but to provoke interest in this endeavour, the Galloway Picts project was not concerned with examining the 'Galloway Picts' (*contra* Breeze 2014), a concept that was probably never more than a medieval Anglo-Norman monastic metaphor for Galloway's 'wild' inhabitants during the twelfth century (Oram 1993, 26). The purpose of this research instead was to investigate and record the environmental and dating evidence not recovered during the previous excavations. From inception, the ultimate hope of the Galloway Picts project was that a firm archaeological *context* for the Pictish inscription at Trusty's Hill could be revealed and that this might enhance understanding of this enigmatic archaeological site and its significance within early medieval Scotland.

Fieldwork results

The 2012 archaeological fieldwork comprised a topographic GPS survey to establish a modern plan and 3D model of the entirety of Trusty's Hill; the re-excavation of Thomas's previous excavation trenches; and a detailed laser scan survey of the Pictish inscribed stone.

Topographic survey

The topographic survey undertaken in April 2012 by RCAHMS demonstrates that the fort on Trusty's Hill comprises a central summit enclosure with outworks to the north-east and south-east, in total covering an area measuring 2874 m² (Fig. 2.1). Both the eastern and western flanks of the hill are devoid of outer ramparts, owing to the natural steep incline of the hill on these sides.

The central oval enclosure measures 31 m north-north-west-south-south-east by 17 m transversely and is defined by a stone rubble rampart largely reduced to a grass-grown scarp. The summit rampart encloses an area of 437 m². Patches of vitrified stone are visible along the course of the rampart where the ground surface has been broken and worn away by livestock. The stone rubble of the collapsed rampart extends down the slope on all sides of the summit. The summit area itself is divided in two by a north-north-west-south-south-east aligned ridge of outcrop separating a 25 m long and 7.5 m wide upper area of relatively level ground with minor scarps along the western edge of the summit from a lower area, also largely level, and measuring 23 m long and 6.5 m wide, along the eastern edge of the summit.

The entrance to the summit was clearly through the south-south-east side of the summit enclosure but the course and configuration of the rampart here is uncertain. The upper rampart appears to terminate at the west side of the entrance. From here are traces of a low bank dropping down to the

south-east between two large rock outcrops. This bank is paralleled by traces of another on the east side of the entranceway. These two banks continue as horn-works along the outcrop crests east and west of the entranceway. Between the horn-work and the summit rampart on the east side of the entranceway lies a sub-circular hollow, its upper north-western side defined by a curvilinear drystone revetment. On the opposite western side of the entranceway (Fig. 2.2), lies a smooth greywacke outcrop face on which the Pictish symbols have been inscribed, along with a considerable amount of largely nineteenth century graffiti. The symbols consist of a double-disc and Z-rod to the left of a natural seam in the stone, and a zoomorphic creature with a curving spiral tail, its belly apparently pierced by a pointed object to the left of the seam (see Fig. 2.21). The carvings are protected by an early twentieth century iron cage bolted into the rock face.

To the south of the summit enclosure, immediately south-west of the western horn-work of the entranceway, behind the Pictish inscribed outcrop, is a level oval shaped terrace measuring 8.5 m west-south-west-east-south-east by 5 m north-north-west-south-south-east. Traces of a second rampart cut across the southern and western edges of this terrace along the crest of a rock outcrop about 1.5 m in height. About 5 m beyond the foot of this is a third rampart, again incorporating a rock outcrop with a drop of around 1.5 m. This bank defines the southern and western edges of a curvilinear level terrace area around the southern flank of the hill. This terrace appears open-ended on its eastern edge where it meets the course of the entranceway to the south-east. Below this lies another level terrace area also around 5 m broad. It is defined on its south-eastern edge by a fourth rampart, which also opens out to the course of the entranceway that runs along the south-eastern flank of the hill. Beyond this rampart lies a narrow terrace,



Fig. 2.1. Topographic plan of Trusty's Hill overlaid with 2012 excavation trenches. © RCAHMS/DGNHAS



Fig. 2.2. The circular hollow, prior to excavation, lying on the opposite side of the entranceway to the iron cage fixed over the Pictish symbols visible on the right

roughly 2 m broad, that extends all the way across to the south-eastern flank of the hill, above a natural break of slope.

To the north-north-west of the summit enclosure, midway down the natural slope, is a level terrace 15 m long and up to 5 m broad. Further to the north-east, beyond the foot of the slope from the summit, there are traces of a fifth rampart along the interior edge of an external rock-cut ditch measuring 6 m wide and almost 3 m deep. The eastern end of this rock-cut ditch appears to have been truncated by quarrying, which extends along the north-eastern flank of the hill.

The excavation

Scheduled Monument Consent was obtained from Historic Scotland prior to the excavation, which required strict adherence to an agreed methodology. Crucially, the methodology allowed only for the re-excitation of Charles Thomas's previous trenches and limited sample excavation of any undisturbed archaeological deposits encountered within these.

The aim of this methodology was to recover and record environmental and artefactual evidence from secure archaeological contexts and the backfill from the 1960 intervention.

The excavation of Trusty's Hill took place between 20 May and 2 June 2012 in dry sunny conditions for all but one of the days. In all, four of Thomas's seven trenches were re-opened. The identification number attributed to each trench adhered to Thomas's system. Therefore Trench 2 was excavated to re-examine the circular depression at the entranceway, Trenches 4 and 5 to investigate the eastern and western sides of the central summit enclosure respectively and Trench 6 to expose the rock-cut ditch at the northern side of the site (Fig. 2.1). The total area exposed, excluding an abortive Trench 4 (see Chapter 7), measured 74.6 m² representing just 2.6% of the entire site. However, in accordance with the conditions of scheduled monument consent, only half of the exposed deposits were excavated, amounting therefore to only 1.3% of the site. Prior to backfilling, terram biotextile sheets were laid out over each trench.

The underlying drift geology of the Boreland

Hills consists of Quaternary Period silt, sand and gravel alluvia. These are comprised of normally soft to firm consolidated and compressible silty clay with occasional layers of silt, sand, peat and basal gravel. The solid geology consists of Cairnharrow Formation Wacke sedimentary bedrock with thin- to medium-bedded greywacke of variable proportion, interbedded with silty mudstone and pockets of distinctive thick-bedded parallel laminated greywacke with abundant concretions. The underlying natural subsoil encountered in the trenches at Trusty's Hill was a loose orange brown silty sand overlying greywacke bedrock. The individual trenches are described below.

Trench 2

Trench 2 measured 18.91 m² and was located at the north-east side of the entranceway opposite the Symbol Inscribed Stone (Fig. 2.1).

The earliest stratigraphic feature cutting the natural greywacke bedrock (2009) within Trench 2 was a rock-cut basin [2008]. This was irregularly curvilinear in shape and measured 1.8 m wide east-west across its top and 0.8 m deep. Only the eastern half of this feature was excavated and exposed (Fig. 2.3). While the break of slope across the top was gradual, the sides, which were all smoothly cut, were near vertical to the north-east and south-west and less so to the east, which had a gradient of 1.5 m in 0.8 m (Fig. 2.4). There was a sharp break of slope at the basin's base which was flat and measured 1.35 m wide east-west. The primary fill deposit (2007) within this rock-cut basin (Fig. 2.4) was 0.2 m deep and comprised of a heavily waterlogged, very soft, dark brown organic silt with frequent inclusions of wood (SF 071, 072, 073, 116, 119, 121 & 177), unburnt and cremated animal bones (SF 118, 120, 157, 158 & 275), charcoal (SF 154), vitrified stone (SF 117) and slingstones (SF 156).

Arranged along the top break of slope curving, along the top of the southern perimeter of the rock-cut basin, were large rounded granite boulders and angular greywacke stones (2010). The 0.27 m high faced edge of this arrangement of stones appeared to continue west, out with the break of slope of the rock-cut basin, where it formed a straight east-west aligned edge, towards the entranceway to the central summit of Trusty's Hill (Fig. 2.3). The westernmost extent of this east-west aligned stone revetment (2010) appeared to be overlain by a north-north-west-south-south-east aligned revetment of large angular flat greywacke stones (2011), 130–150 mm wide and 50–40 mm high, associated with a spread of rubble core to the immediate west. This rubble spread (2011) was one course, measuring 0.08 m, in height and was over 0.48 m wide, extending beyond the western edge

of Trench 2, towards the entranceway to the central summit of Trusty's Hill (Fig. 2.3).

The primary fill (2007) of the rock-cut basin [2008], and by stratigraphic extension the stone revetment (2011), was overlain by a 0.5 m deep layer of backfill soil (2005) from Thomas's excavations (Fig. 2.4). This layer (2005) comprised of a compact mid-grey clayey silt with frequent inclusions of angular stones of various sizes, some vitrified, a quartz pebble (SF 051), slingstones (SF 068 & 155), unburnt and cremated animal bones (SF 067 & 153) and charcoal (SF 152). This layer of backfill soil was capped by a spread of large flat angular greywacke stones (2004/2006) including some vitrified stones (SF 151) measuring 0.1 m deep placed around the edge of the rock-cut basin (Figs 2.3 & 2.4). This layer was sealed by a 0.15 m deep layer of loose dark brown organic silt (2003) with frequent small roots and a substantial amount of modern glass. This was overlain by a 0.02 m deep layer of compact light brown silty sand and angular greywacke stones of various sizes (2002) and including several fragments of worked stone (SF 043 & 190), charcoal (SF 042), modern glass and paper. A 0.05 m deep layer of turf (2001), composed of loose dark brown sandy silt with occasional inclusions of small stones, formed the last stratigraphic layer in Trench 2.

Trench 4

Trench 4 was the largest of the excavation trenches measuring 30.31 m² and was located at the east side of the central summit interior of Trusty's Hill (Fig. 2.1).

The earliest stratigraphic feature within Trench 4 was an irregular rock-cut linear trench or shelf [4021] partially exposed within the centre of the trench, cutting the natural subsoil (4019) and underlying greywacke bedrock (4022). This north-south aligned feature, measuring over 0.80 m deep, was defined by a sharp break of slope at the top with varying smooth sides and irregularly stepped sides in the natural fissures of the underlying bedrock (Figs 2.6 & 2.7). This feature was overlain by a 0.17 m deep deposit (4016) of loose dark greyish brown silty sand containing inclusions of grit and small stone fragments, along with animal bones (SF 170 & 259), garnet (SF 193), slag (SF 171, 217 & 238), charcoal, charred seeds and charred nutshells (Fig. 2.5).

While not fully excavated, this deposit (4016) was almost certainly cut by two post-holes [4015 & 4017] identified as dips within the overlying rubble centre of the vitrified rampart (4004) surrounded by concentrations of vitrified stone (Fig. 2.5). The southernmost post-hole [4015] measured 0.3 m square and over 0.5 m deep and was defined by near vertical sides of vitrified stone. This post-hole was 1.6 m distant from the other post-hole [4017], which was



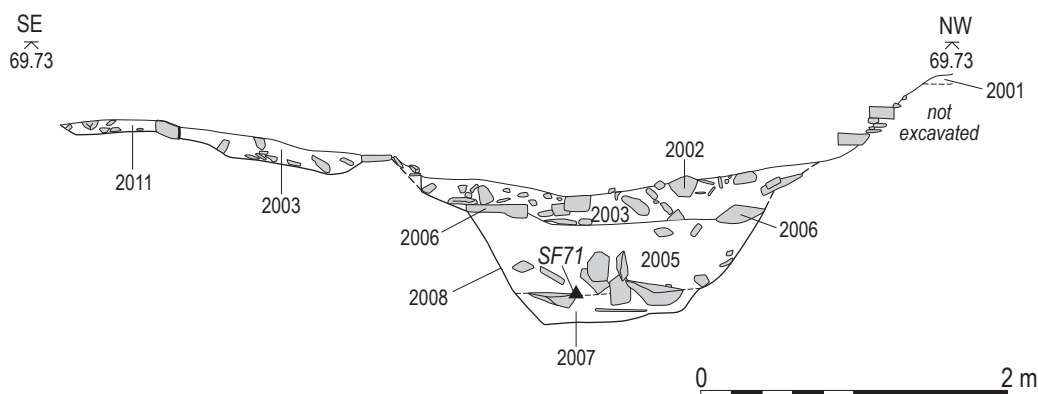


Fig. 2.4. South-east facing section of rock-cut basin, Trench 2

sub-rounded in shape, measured 0.2 m wide and over 0.5 m deep and was also defined by near vertical sides of vitrified stone. Both post-holes were filled with loose rubble from the surrounding rampart core (4004). The rampart core (4004) comprised drystone greywacke angular stones, measuring between $200 \times 100 \times 50$ mm and $300 \times 270 \times 100$ mm in size. Many of these stones were fire-reddened and vitrified (SF 130). The soil matrix between the stones was composed of loose dark brown clayey silt with frequent inclusions of small stones and grit, along with unburnt and cremated animal bones (SF 127, 129 & 246), charcoal (SF 126) and metal slag fragments (SF 227). A north-south aligned length of the rampart was exposed in Trench 4. This segment measured 5.40 m long and ran parallel to the alignment of the rock-cut shelf [4021]. It measured 1.6 m wide and 0.69 m high. The rampart was not fully excavated. Instead excavation was limited to the removal of a sufficient depth of overlying stone to define the exterior and interior faces, and a narrow sondage was excavated along the southern edge of Trench 4 to expose the rampart's full width (Figs 2.5 & 2.6).

Separately to the west of these features were two discrete deposits of soil overlying the natural subsoil (4019) located along the trench's western edge (Fig. 2.5). At the south-western corner of Trench 4 was a loose, mid-brown, sandy silt (4008) which was 0.25 m deep and contained frequent inclusions of small angular pebbles and stones, animal bone fragments (SF 054, 172, 181 & 250) and charcoal (SF 182). Just to the north of this, along the western edge of Trench 4 but separated by an outcrop of bedrock (4022), was another deposit of loose, mid-brown, sandy silt (4020), which was examined by a small sondage (Fig. 2.5) and found to be 0.10 m deep, with frequent inclusions of small angular stones, fragments of metal slag (SF 230), animal bones (SF 260) and a single glass shard (SF 194).

Overlying the eastern edge of deposit (4020) and abutting the interior edge of the rampart (4004), was a rough uneven spread of rectangular and angular

slabs of greywacke stone (4018). Each slab measured between $350 \times 250 \times 50$ mm and $350 \times 350 \times 50$ mm (Fig. 2.7). The overall spread (4018) measured 0.25 m deep and 1.4–3.6 m wide from the interior edge of the rampart (Fig. 2.5). The matrix of soil between these stones was identical to the overlying layer (4007). It comprised loose, dark greyish brown silty sand 0.25–0.45 m deep and extending 2.7–5.5 m west from the interior edge of the rampart (Fig. 2.8 & 2.9). Within this layer of rich organic soil (4007) there were numerous inclusions of animal bones (SF 062, 079, 088, 090 & 093), charcoal (SF 063, 089, 091 & 094), lithics (SF 053, 064, 092, 095, 140, 187, 188 & 189), crucible fragments (SF 087, 106 & 162), furnace lining fragments (SF 111 & 131), a heating tray fragment (SF 175), a crucible stand fragment (SF 278), clay mould fragments (SF 174, 192 & 279), a tuyere fragment (SF 240), metal slag fragments (SF 096, 107, 108, 128, 137, 160, 178, 232 & 234), hammerscale (SF 207, 213 & 214), iron pyrites (SF 109), fire-cracked granite (SF 132), vitrified stone (SF 164, 185 & 199), an iron pin (SF 113), a fragment of garnet (SF 195) and a rim sherd of E1c pottery (SF 114). This dark soil deposit (4007) also contained slingstones (SF 110, 112 & 123), several large greywacke slabs (each measuring around $400 \times 200 \times 50$ mm) and fragments of vitrified stone (SF 122). A soil sample (Sample 051) taken with a kubiena tin was extracted from the interface between this deposit (4007) and the layer of rubble (4003) that sealed this (Fig. 2.6).

West of the western extent of the dark soil deposit (4007), and overlying the easternmost extent of the rubble spread (4018), was a layer of moderately compact dark brown sandy silt (4011). This was 0.05–0.10 m deep and included frequent inclusions of small angular pebbles and stones, an iron fragment (SF 115), a lead fragment (SF 186), a crucible fragment (SF 169), metal slag fragments (SF 143, 161, 176, 179 & 233), fire-cracked granite (SF 168), a lithic (SF 180), a unworked stone (SF 183), slingstones (SF 149), numerous burnt and unburnt animal bone fragments (SF 141, 173 & 243) and charcoal flakes (SF 146 & 167).

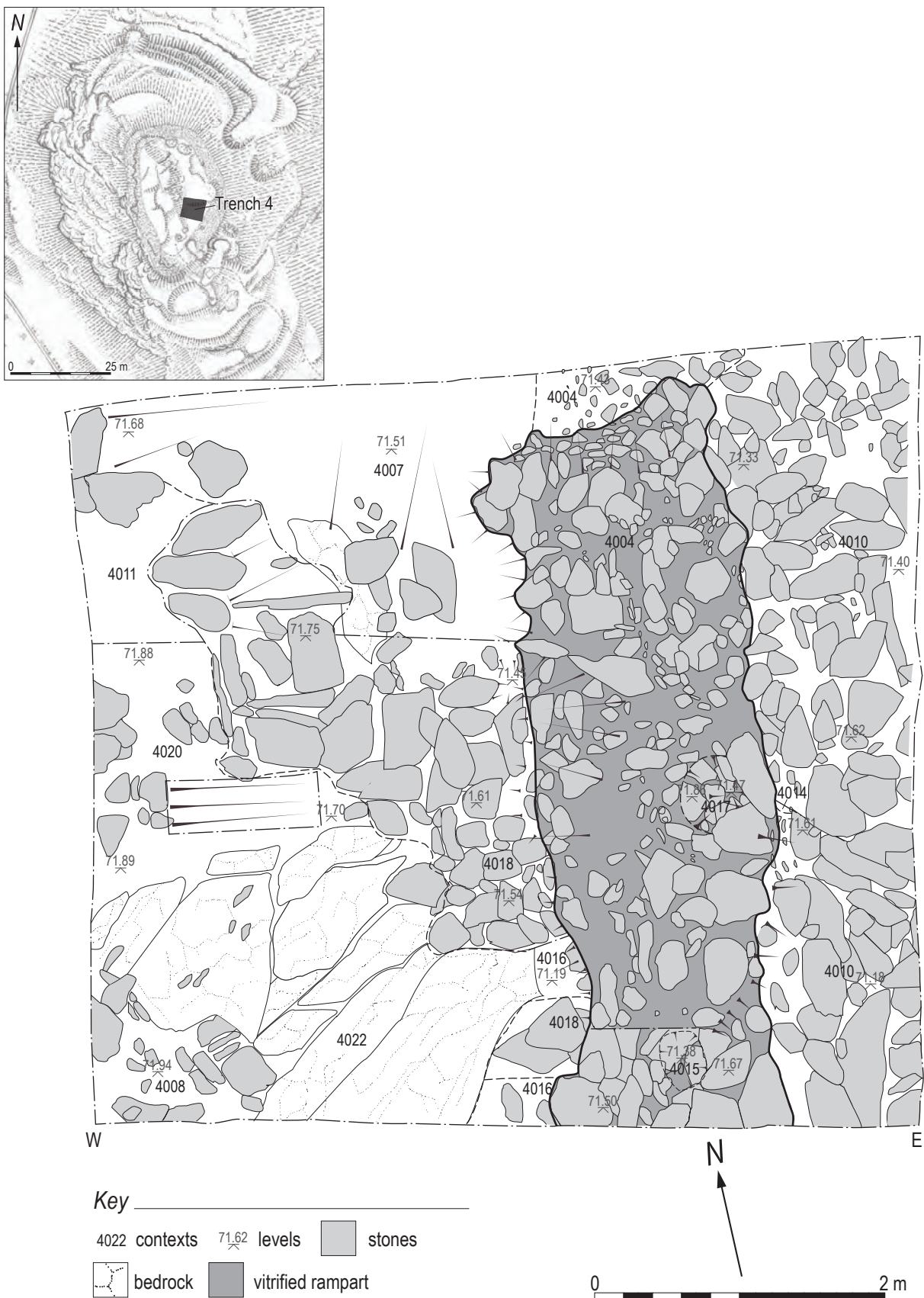


Fig. 2.5. Plan of rampart core (4004) and structural post-voids (4015 & 4017), exterior rubble spread (4010), interior rubble spread (4018) and deposits (4008 & 4020) in Trench 4

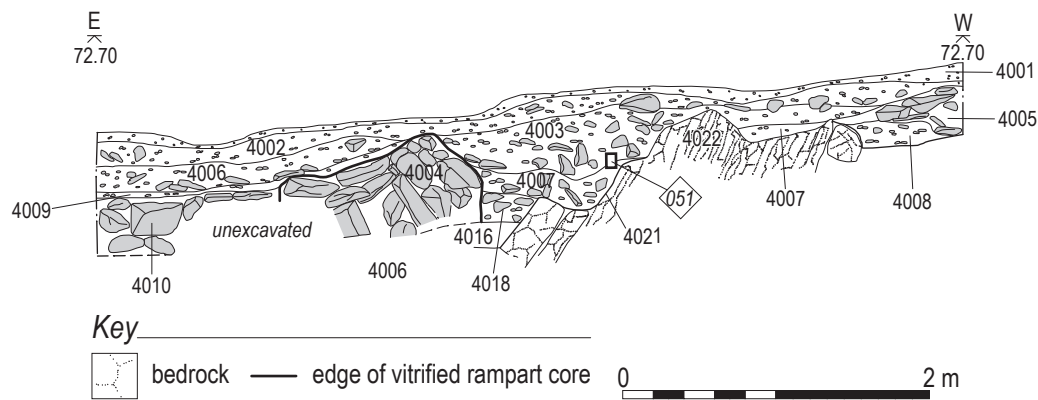


Fig. 2.6. North facing Section of Trench 4



Fig. 2.7. Rock-cut linear shelf [4021] with vitrified core of the rampart (4004) evident to the left, and dry stone rubble spread (4018) in the centre foreground, Trench 4, from the north.

Overlying layer (4011) was an irregular linear spread of large angular greywacke drystone slabs (4005), each measuring between $720 \times 480 \times 170$ mm and $520 \times 280 \times 60$ mm in size. The matrix between the slabs comprised a mid-brown sandy silt with frequent inclusions of pebbles and roots, animal bone fragments (SF 99 & 124), vitrified stone (SF 100) and charcoal (SF 101 & 125). The soil matrix was similar in its upper level to the layer (4002), which physically overlay it, but slightly darker and more similar in its lower level to the underlying deposit (4011). This 0.40 m deep spread of slabs (4005) extended across the western part of Trench 4 in a south-west–north-east alignment (Figs 2.8 & 2.9), sloping down towards the east as far as the western extent of deposit (4007) with which it was mixed.

Cutting through the central part of the exposed

extent of layer (4011) were two features filled with concentrated deposits of charcoal rich soil (Fig 2.9). The more southerly of these was a circular spread of compact very dark brown silty charcoal (4012), 0.12 m in diameter and 0.08 m deep. It contained occasional pebbles and some animal bone fragments (SF 272). The other deposit, which lay 1.50 m to the north, also comprised compact very dark brown silty charcoal (4013) and measured 0.24 m in diameter and 0.07 m deep. This contained occasional small angular stone inclusions, hammerscale fragments (SF 211), metal slag (SF 220 & 239) and fragments of burnt and unburnt animal bones (SF 252 & 270).

Overlying these deposits and the spread of stone slabs (4005) was a 0.18 m deep rubble layer of split and angular sandstone, shale and greywacke stones (4003), each on average measuring $200 \times 150 \times 50$



Fig. 2.8. Excavation horizon of Thomas's Trench 4 comprising dark soil spread (4007) abutting west side of rampart core (4004) to the left and underlying interior stone slabs (4005) to the right, from the north-west

mm and predominantly heat-reddened. This layer of stones extended west from the rampart (4004) across the interior of the site (Fig. 2.10). These stones sloped down towards the west in marked contrast to the eastern direction of the spread of stone slabs (4005) that underlay it. Contained within this rubble (4003) were frequent inclusions of vitrified stone fragments (SF 070) and two concentrations of rounded pebbles and cobbles identified as slingstones, one at the south side of Trench 4 (SF 059) and another (SF 085) closer to the north-west corner of Trench 4 (Fig. 2.10). The matrix within this stone rubble (4003) was a loose, dark greyish-brown, silt containing an iron object (SF 016), numerous animal bone fragments (SF 052, 065, 081 & 086), charcoal (SF 066 & 080), a fragment of snail shell (SF 084) and a fragment of tinfoil (SF 060).

Along the entire eastern edge of Trench 4, extending over 0.90 m out from the exterior side of the rampart (4004), was a 0.40–0.65 m deep spread of large rectangular and angular faced drystone greywacke blocks (4010) ranging between 900 × 300 × 200 mm and 300 × 200 × 100 mm in size (Fig. 2.9). These large grey stones were markedly distinct from the reddened

and vitrified rubble core of the rampart (4004) and contained many voids, particularly when close to the external side of the rampart. The spread (4010) sloped down the hillside beyond the eastern limit of Trench 4 (Fig. 2.11). The layer's matrix comprised loose, dark brown, clayey silt with inclusions of grit and small stones, burnt and unburnt animal bones (SF 104, 134, 142 & 249), crucible fragments (SF 201), metal slag fragments (SF 102, 148 & 235), charcoal (SF 103, 133 & 144) and the odd small piece of vitrified stone (SF 135). Within this spread of stones (4010) was a 0.46 m wide and 0.04 m deep irregular lens (4014) of moderately compact dark brown to black silty charcoal containing numerous and large fragments of burnt and unburnt animal bone (SF 257 & 273) and some fragments of metal slag (SF 276).

Overlying the spread of stones (4010), at the south-east corner of Trench 4 (Fig. 2.9), was a 0.04 m deep layer of moderately compact mid-brown silt (4009) with frequent pebble and small angular stone inclusions, burnt and unburnt animal bones (SF 074, 082 & 258), metal hammerscale and slag fragments (SF 215 & 236) and charcoal (SF 075 & 083). This thin



Fig. 2.9. Plan of dark soil spread (4007) abutting west side of rampart core (4004), dark soil spread (4011) and underlying interior stone slabs (4005), and exterior soil spread (4009) overlying rubble spread (4010), Trench 4

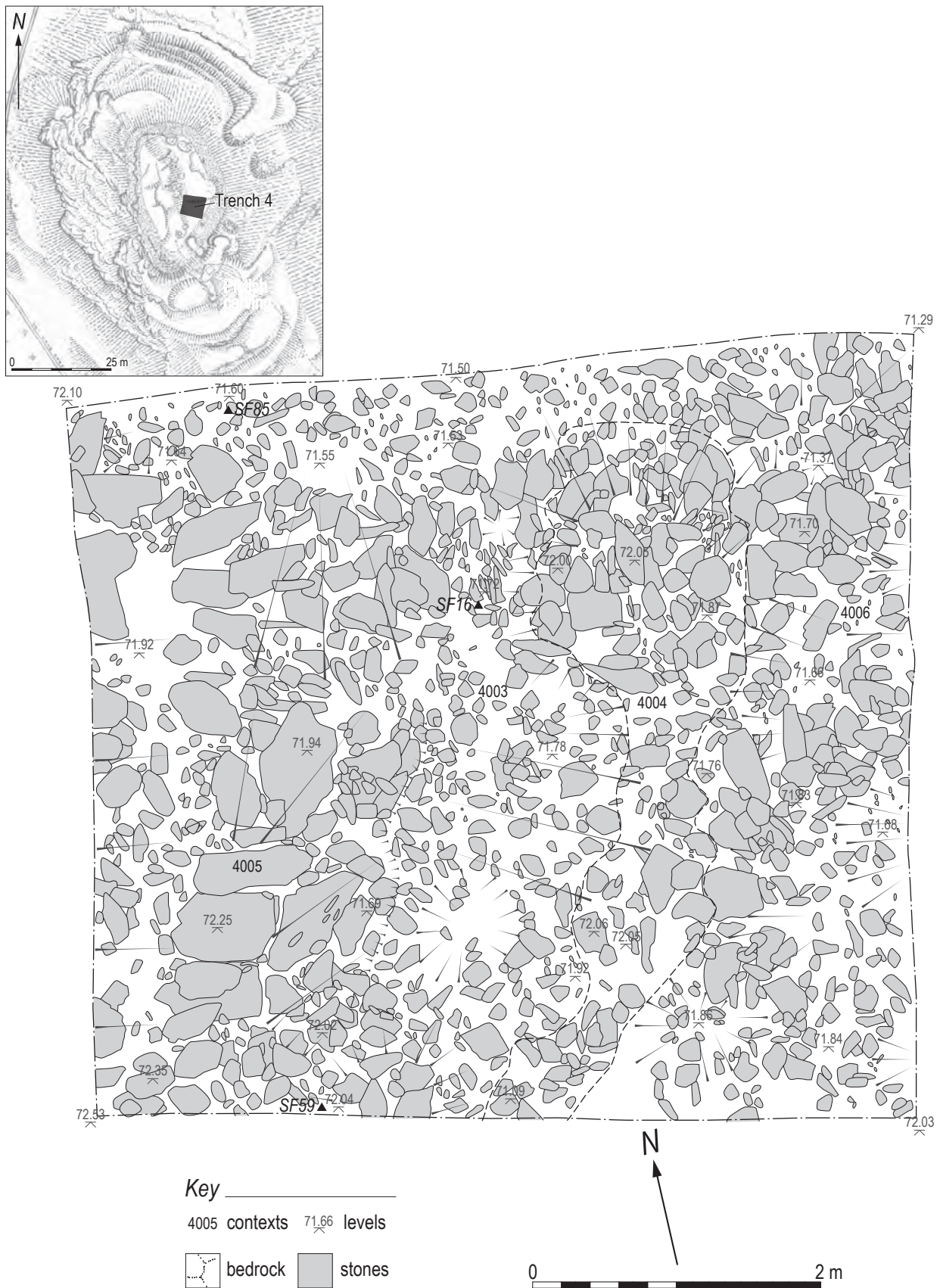


Fig. 2.10. Plan of heat-reddened rubble spread (4006) across exterior east side of the rampart core (4004) and heat-reddened rubble spread (4003) across the interior west side, overlying stone slab spread (4005), Trench 4



Fig. 2.11. Exterior rubble collapse (4010) on the left, to the east of rampart core (4004) in the centre, Trench 4, from the north

layer was itself sealed by a 0.30 m deep rubble layer of split and angular greywacke stones (4006), each measuring between 200 × 120 × 70 mm to 600 × 200 × 150 mm in size and predominantly heat-reddened. This layer of stones (4006) extended to the east 1.10 m from the rampart (4004) and down the exterior slope of the hill (Fig. 2.10). Contained within the full depth of this rubble (4006) were frequent inclusions of vitrified stone fragments. Its matrix was a loose, dark brown, silty sand containing numerous animal bone fragments (SF 034, 058, 078 & 159) and charcoal (SF 061 & 077).

Both interior and exterior layers of rubble (4003 & 4006), as well as the rampart (4004) itself, were truncated to the north of Trench 4 by stone robbing. Sealing both the exterior and interior layers of collapsed rubble (4003 & 4006) was a 0.15–0.20 m deep backfill layer of moderately compact, dark greyish-brown, silty sand (4002). The layer contained frequent root bioturbation, pebbles, small to large rounded and angular stones (particularly concentrated in some areas) and vitrified stone fragments (SF 005). Numerous animal bone fragments (SF 004, 010, 011, 012, 021, 030, 076, 138, 139, 248 & 267), charcoal (SF 014 & 027), fire-cracked granite (SF 136), hammerscale (SF 209 & 212), metal slag (SF 229 & 237), a crucible fragment (SF 037), undiagnostic vitrified material (SF 200), a copper alloy roundel (SF 023), an iron rod (SF 036), a slingstone (SF 024) and a flint lithic (SF 039)

were recovered from this backfill (4002). This backfill deposit was itself sealed by a thin turf and topsoil layer (4001) comprising loose dark brown silty sand, up to 0.20 m deep in places, but through which the highest surviving stones of the rampart (4004) were visible. Occasional vitrified stone fragments (SF 002, 003 & 006), modern glass shards (SF 038) and a stone rubbing tool (SF 001) were recovered from this latest stratigraphic layer in Trench 4.

Trench 5

Trench 5 measured 15.25 m² and was located at the west side of Trusty Hill's central summit enclosure (Fig. 2.1).

One of the earliest stratigraphic features within Trench 5, cut into the loose, orange-brown, silty sand subsoil (5020) and natural greywacke (5008) outcropping, was a narrow linear rock-cut feature [5004]. This extended for 1.95 m from near the northern corner of Trench 5, through the eastern end of the trench, to the southern trench edge on a north-north-east to south alignment (Figs 2.12 & 2.13). The feature's profile appeared as a V-cut to a depth of 0.25 m, with a sharp break of slope on the western side and a more gradual slope on the eastern side. The eastern side of the cut was discoloured orange-brown suggesting heating. To the west of this was another

rock-cut feature; an irregular sub-circular depression [5023] measuring 0.80 m long, 0.80 m wide and 0.40 m deep. It had a sharp break of slope at the top, gradual sloping irregular sides and a rough-hewn V-shaped base. The sides of this rock-cut feature [5023] also exhibited signs of heating through slight orange-brown discolouration and it was filled with a sterile loose, grey-brown, clayey silt with gravel and pebble inclusions as well as large packing stones (5009).

To the west of these rock-cut features, also cutting the loose, orange-brown, silty sand subsoil (5020) and natural greywacke (5008), was an irregular rock-cut linear trench or shelf [5024] partially exposed by a sondage along the southern half of the trench (Figs 2.12 & 2.13). This north-north-west-south-south-east aligned feature [5024] was defined by a sharp break of slope at the top with varying smooth and irregularly stepped steep cuts into the natural fissures of the underlying bedrock. This created a series of three conjoined, roughly cut and west oriented, quarried faces. It measured 1.15 m deep from the break of slope at its eastern edge to its base at the western edge of Trench 5.

The interface of this rock cut feature [5024] was overlain by a moderately compact dark brown sandy silt (5017) containing inclusions of grit and small stone fragments particularly throughout the upper part of this deposit. This deposit extended for 2.9 m from the western edge of Trench 5 towards the quarried rock face near the centre of the trench (Fig. 2.14). The depth of this deposit ranged between 0.10 and 0.35 m. A soil sample (Sample 052) taken with a kubiena tin was extracted from this deposit (Fig. 2.13). There were also inclusions of burnt and unburnt animal bones (SF 050, 145, 247, 266, 268 & 277), charcoal (SF 049 & 147), an incomplete circular glass bead (SF 197), haematite (SF 196), five crucible sherds (SF 203), slag (SF 226), failed crucible sherds (SF 231 & 274) and hammerscale (SF 204, 208 & 218).

This layer (5017) of material was cut by the base of a sub-circular post-hole [5021], 0.30 m in diameter and which was apparent for a depth of at least 0.05–0.10 m with an undulating, gently sloping, flat base oriented east–west. This was filled by a loose to moderately compact dark brown sandy silt (5022) with occasional small stones and inclusions of burnt and unburnt animal bones (SF 150, 165 & 271). There was also a small amount of charcoal (SF 166) within this. The lower fill may have been disturbed at an unknown period by a burrowing animal, as a likely burrow truncated [5021] and extended to the west under the westernmost section of Trench 5. The burrow was not excavated, though the void was confirmed by probing. The upper fill however appeared undisturbed and partially overlay several probable packing stones along the north-eastern, southern and western edges of the post-hole.

The upper extents of post-hole [5021] and its fill (5022) were largely lost in the overlying rubble and matrix of the rampart (5005), which extended east for up to 1.17 m from the western edge of Trench 5. The feature spanned across the northern and southern trench edges on a north-north-west to south-south-east alignment (Fig. 2.14). The rubble core of the rampart (5005) contained numerous long and angular greywacke stones, many of which were vitrified, measuring between 200 × 100 × 50 mm and 350 × 250 × 100 mm in size. Its matrix comprised dark brown silty sand with inclusions of burnt and unburnt animal bones (SF 163 & 256), slag (SF 219 & 222). Of particular note within the rampart core (5005) was a concentration of vitrified and accreted greywacke stones associated with dark brown silty sand (5018) in the south-west corner of Trench 5 (Fig. 2.13 & 2.14). This lens contained burnt and unburnt animal bone (SF 069, 098 & 254), crucible sherds (SF 097 & 202), hammerscale (SF 216) and slag (SF 221). Higher within the matrix of the rubble core (5005) was a circular concentration of charcoal-rich dark brown clayey sand (5012) measuring 0.05 m in diameter and 0.01 m deep (Fig. 2.15). This was completely sampled and included animal bones (SF 262) and vitrified stone (SF 228). The upper rampart core (5005) included a layer of large greywacke stones (5002) up to 700 × 250 × 200 mm in size (Fig. 2.13 & 2.16). Many of these stones were discoloured orange-brown through heating, and there were numerous vitrified stones (SF 007). The matrix between the stones ranged between a dark brown silty sand, likely through bioturbation from the top-soil, through to a reddish brown sandy gravel containing animal bones (SF 008, 048 & 243), charcoal (SF 044), an iron file (SF 022), slag (SF 210) and lithic fragments (SF 242). The rubble rampart (5005) and its constituent lenses (5018/5012/5002) survived up to 0.50 m high in all.

Between the interior rock-cut features [5023 & 5004] and the rubble rampart (5005) and physically overlying the deposit (5017) was a 0.07 m deep layer of medium to large sized flat greywacke stones within a dark brown silty sand matrix (5010/5011). This extended east from the interior edge of the rampart (5005) for up to 2.1 m as far as the rock cut faces [5024] (Fig. 2.13 & 2.14). There were numerous inclusions of burnt and unburnt bone (SF 041, 055, 057, 255 & 263), charcoal (SF 040 & 056) and hammerscale (SF 241) within the matrix of this stone spread (5010/5011).

Overlying stone spread (5010/5011) was a moderately compact dark brown organic sandy silt deposit (5014) with moderate inclusions of small stones and charcoal throughout. This extended for over 3 m from the eastern edge of the rampart (5005) as far as the rock cut face [5024] and varied between 0.02 m and 0.27 m in depth (Fig. 2.13 and Fig. 2.15). From the western part of this layer (5014), near the

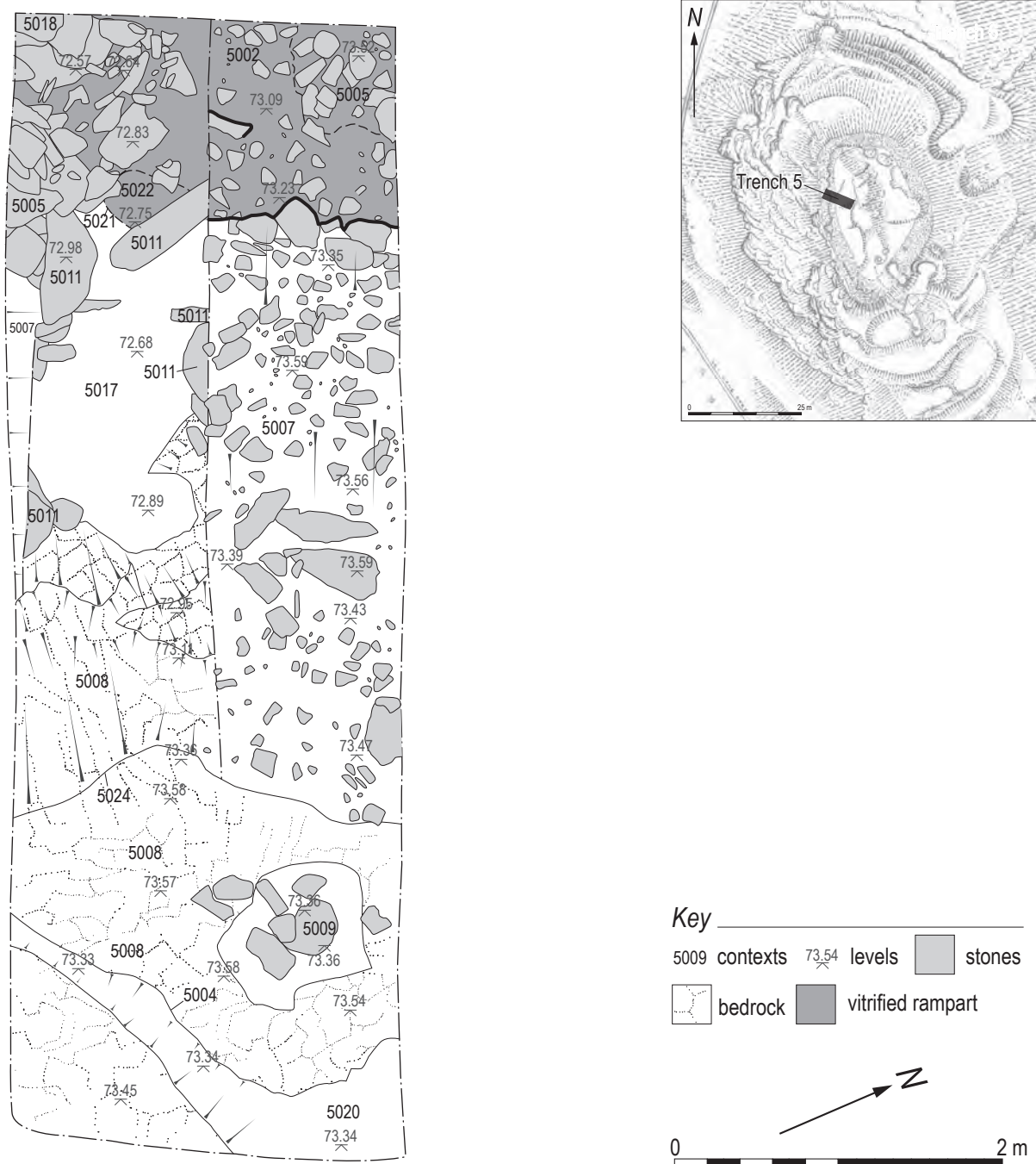


Fig. 2.14. Plan of deposit (5017) and overlying stone slabs (5011) abutting the interior edge of the rampart core (5005 & 5018) and post-hole (5021), exposed within Trench 5 sondage

eastern edge of rampart (5005), a rim sherd of samian ware was recovered (SF 032). There were frequent inclusions of other finds from this deposit including charcoal (SF 031 & 047), burnt and unburnt animal bones (SF 033, 046 & 251), a spindle whorl (SF 035), a fired clay lump (SF 191) and hammerscale (SF 224).

The charcoal rich layer (5014) was sealed by a deposit of split and angular greywacke stones (5007/5013), each measuring between 200 × 120 × 70 mm and 600 × 200 × 150 mm in size and predominantly

heat-reddened with frequent inclusions of vitrified greywacke stone. The layer's soil matrix comprised moderately compact, reddish-brown, silty sand and gravel. This deposit (5007) had a bell-shaped profile in section, with the highest point to the west where it began to slope gently towards the east (Fig. 2.13). The deposit ranged between 0.11 m and 0.55 m in depth and extended across the entire width of Trench 5 though not its length, falling short of rock-cut features [5004] and [5009/5023] to the east (Fig. 2.16).

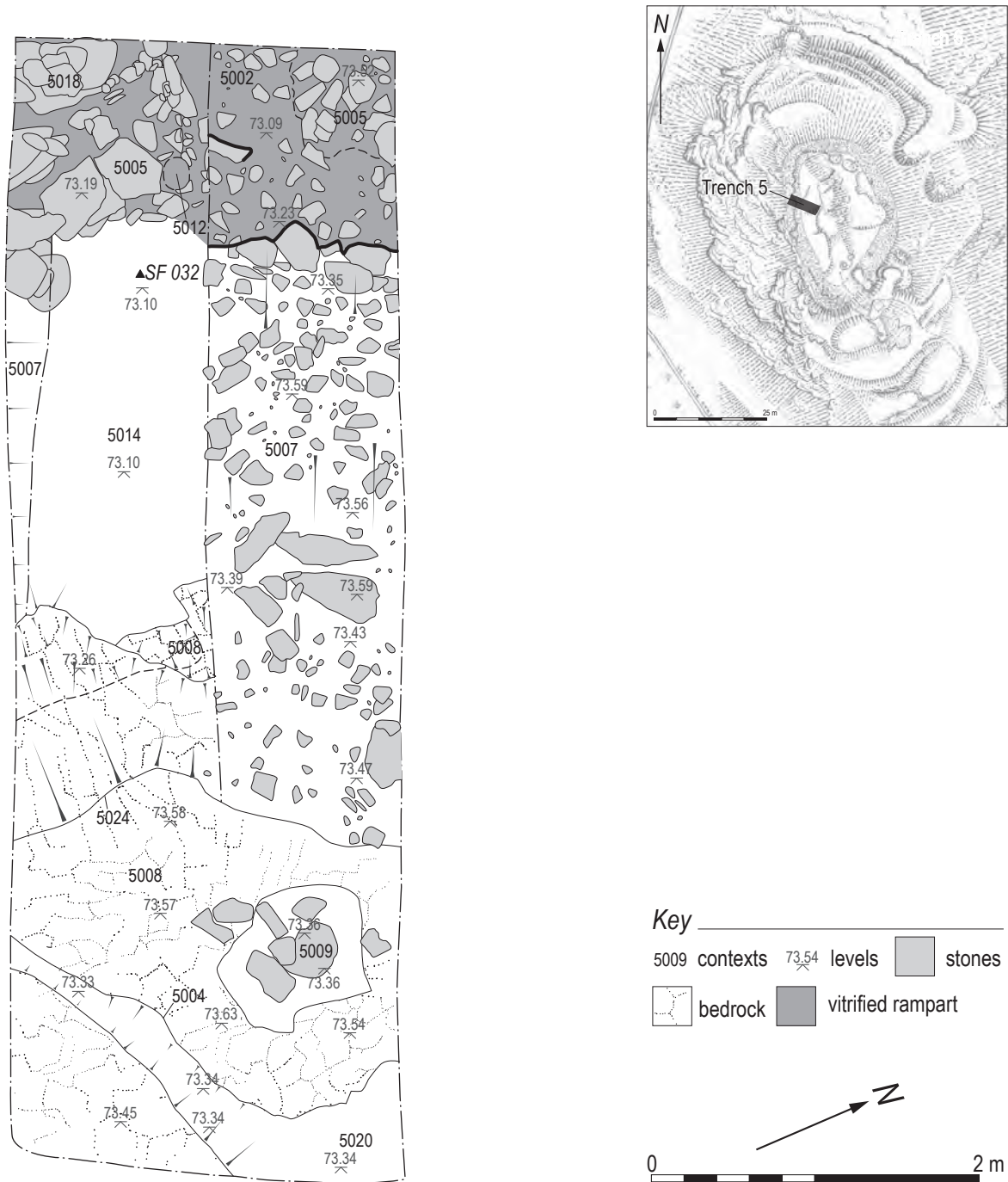


Fig. 2.15. Plan of deposit (5014), rampart core (5005 & 5018) containing deposit lens (5012), exposed within Trench 5 sondage

Emerging from the north-easternmost extent of rubble spread (5007) were two unheated worked stones, one an unexcavated sub-square block faced on two sides located near the north-eastern side of the trench (Fig 2.17), and the other a large stone with two distinctive rounded recesses (5013; SF 029; Fig. 2.18). A socketed iron tool (SF 026), charcoal (SF 028), hammerscale (SF 225) and numerous unburnt animal bones (SF 025 & 264) were recovered from this deposit.

This spread of rubble (5007/5013) was overlain by a loose layer of dark orange-brown silty clay (5003/5006)

with occasional small stone inclusions, up to 0.40 m deep in places and extending across the entirety of Trench 5. Numerous burnt and unburnt animal bone fragments (SF 009, 048 & 244), charcoal (SF 015 & 045), slag (SF 206), a stone with vitrified surface (SF 020), a rubbing stone (SF 018), a burnt pebble (SF 019) and lithics (SF 013 & 017) were recovered from this backfill soil deposit (5003). This was itself sealed by a thin turf and topsoil layer (5001) comprising loose dark brown silty sand, up to 0.20 m deep in places. This was the latest stratigraphic layer in Trench 5.

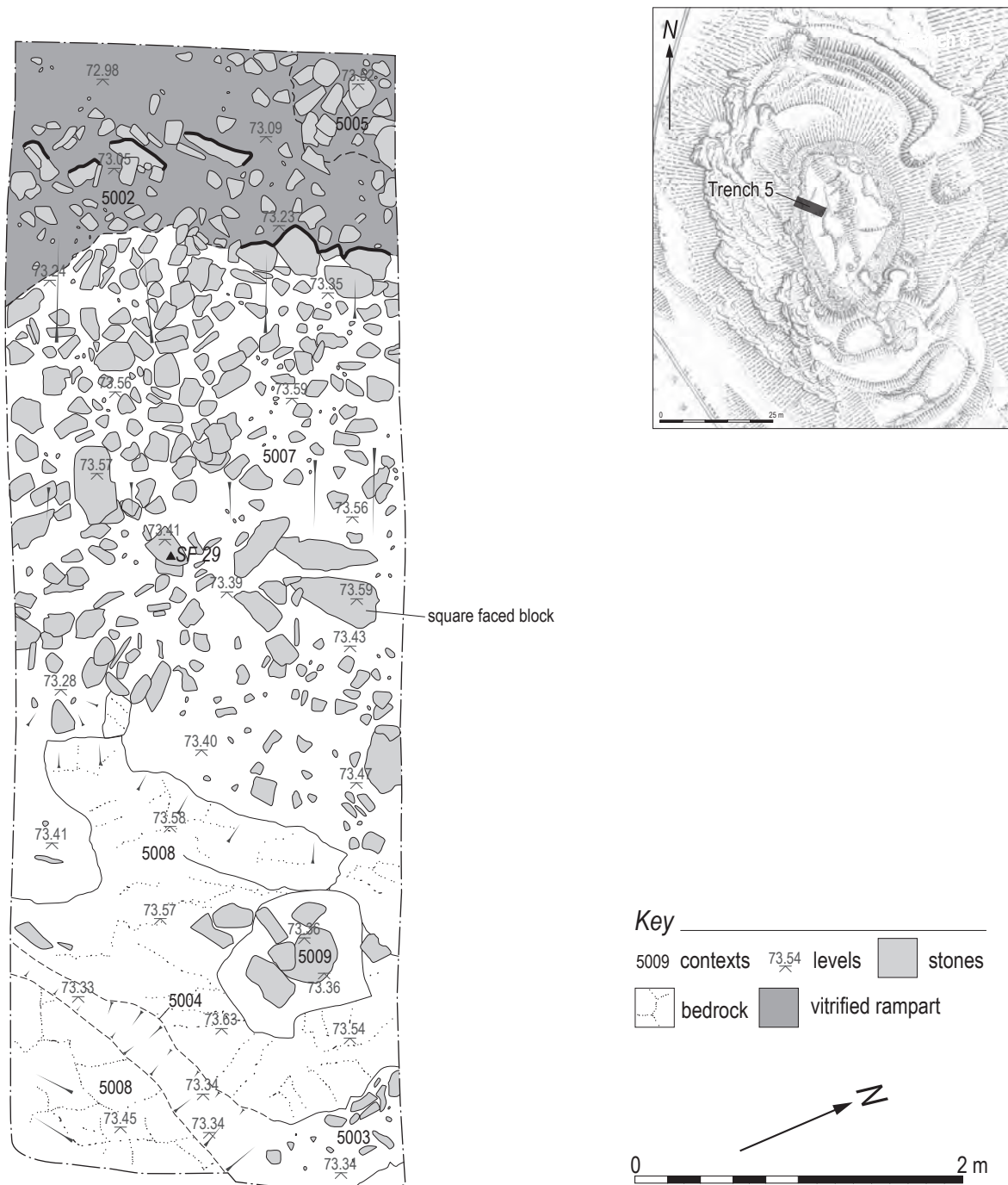


Fig. 2.16. Plan of rampart deposit (5002) and rampart collapse (5007), Trench 5

Trench 6

Trench 6 measured 10.13 m² and was located at the north-north-east side of Trusty's Hill (Fig. 2.1). The earliest demonstrable stratigraphic feature cutting the natural greywacke bedrock (6004) within Trench 6 was the rock-cut ditch [6003]. This east-south-east-west-north-west oriented linear ditch measured 5.8 m wide at the top, c. 3.2 m wide at its base and was up to 2.8 m deep (Figs 2.19 & 2.20). From a sharp break

of slope at the top, the angle of the slope along the northern outer edge of the ditch was approximately 30° in a series of vertically cut shelves. The break of slope at the top along the southern inner edge of the ditch was also sharp, but with a slightly shallower angle of slope, of approximately 45°, cut in a series of vertical shelves. The break of slope at the base was also sharp. The base of the ditch was partially exposed and comprised a flat surface of weakly



Fig. 2.17. Sub-square faced block within rubble collapse 5007, Trench 5



Fig. 2.18. Anvil stone (SF 29) with two distinctive rounded recesses within rubble collapse 5007, Trench 5

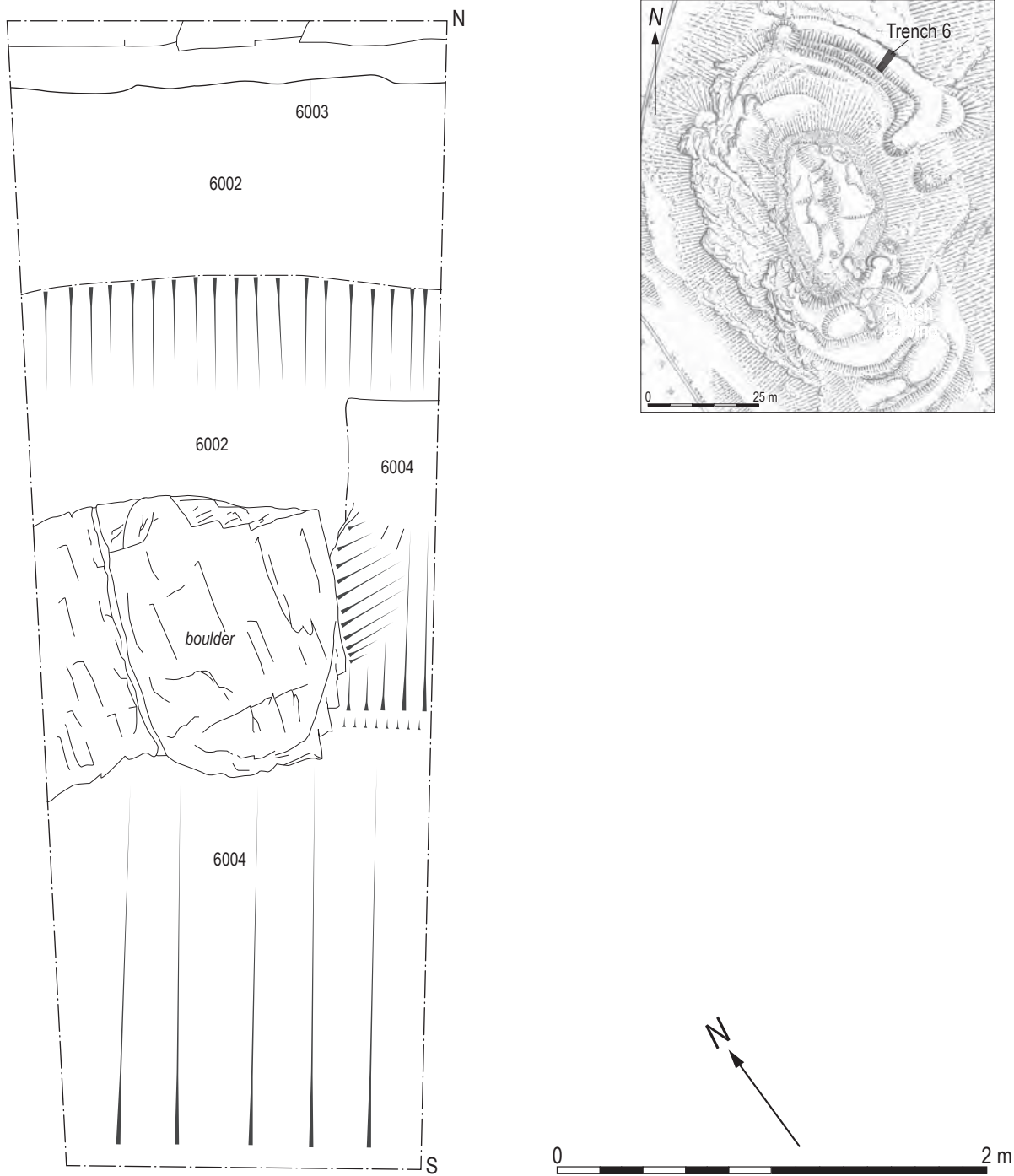


Fig. 2.19. Plan of Trench 6

cemented weathered bedrock, which was slightly over-excavated. A rock slip, comprising a single large boulder of greywacke rock that had broken off the southern side of the ditch, was also exposed.

The ditch was filled with loose, orange-brown silty sand (6002), containing many small angular stones, which resembled shattered bedrock rather than collapsed rubble. The depth varied across the trench, but was 1.2 m at its deepest. This deposit

was uniformly similar throughout its depth with no signs of stratified layers or artefacts. A soil sample (Sample 050) taken with a monolith tin was extracted from the interface between the ditch fill (6002) and the underlying bedrock (6004). This deposit (6002) lay directly below the topsoil (6001), which comprised of loose, light brown, silty sand 0.10 m deep. This was the latest stratigraphic layer in Trench 6.

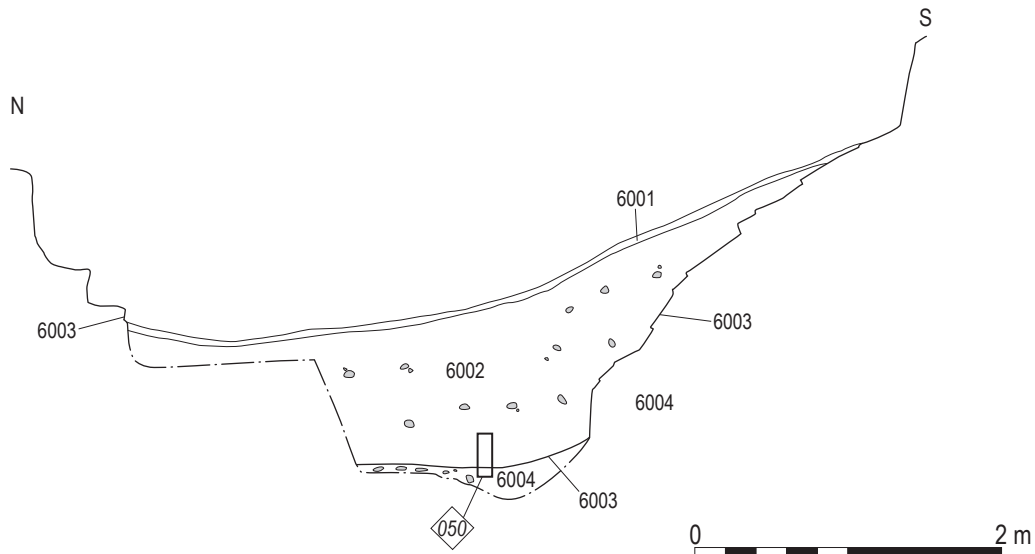


Fig. 2.20. West facing section of Trench 6

Laser scan survey of Pictish inscription

A series of carvings are apparent on a north-east facing natural outcrop of greywacke to the left of the entranceway to the summit of Trusty's Hill (Fig. 2.21). The exposed surface is divided vertically by a natural fissure. The upper part of the slab is dominated by two large symbols. The Pictish carvings include a double-disc and Z-rod symbol to the left of the natural fissure, and a 'Pictish beast' and sword or pin, and emanating spirals where this appears to pierce the underside of the beast, on the right hand side of the fissure. A human face mounted with two spiral horns has also been carved at the lower left hand corner. A considerable amount of early modern graffiti has also been carved onto the outcrop, comprising initials, dates and other doodles.

A laser scan survey of the outcrop undertaken in June 2012 by the Centre for Digital Documentation and Visualisation LLP provides the most accurate record to date of the Pictish inscription at Trusty's Hill. The laser scan survey was undertaken following the temporary removal of its protective iron cage and the hand cleaning of lichen, turf and topsoil that obscured the inscribed surface (Fig. 2.22 & 2.23).

Based on the new laser scan, a number of initial observations can be made. In contrast to the survey of the Pictish Inscription undertaken in the early 2000s (see Fig. 1.12), no ogham was apparent along the southern, left hand edge of the inscribed stone. Nor was the cup-mark above the 'sea-beast' apparent. It should also be noted that the 2012 laser scan confirms that the Z-rod and double disc symbol do not interweave as incorrectly depicted by John Romilly Allen and Joseph Anderson (1903, 477–8), but intercut each other across the lower bar of the double



Fig. 2.21. 2012 Laser scan survey of inscribed symbols at Trusty's Hill. © DGNHAS/CDDV

disc (compare Fig. 1.6 with Fig. 2.21). In addition, the 2012 survey adds new detail to the 'Pictish beast' and in particular showing the worn remnants of an elongated lower snout apparently extending across the natural fissure and near the lower right corner of the double-disc and Z-rod. Furthermore, the right-hand horn of the horned head at the bottom of



Fig. 2.22 Pictish inscribed stone after the temporary removal of the protective cage but prior to cleaning.
© DGNHAS/CDDV

the stone cuts one of the nineteenth century graffiti signatures demonstrating that the horned head is not ancient. This confirms John Stuart's suspicion that the



Fig. 2.23 Pictish inscribed stone after cleaning. © DGNHAS/CDDV

horned head was a more recent addition to the other carvings (1856, 31). A detailed analysis of the laser scan is found in Chapter 6.

Dating and phasing

Archaeomagnetic dating

Samuel Harris and Cathy Batt

Heated archaeological materials can retain a record of the Earth's magnetic field when they were last heated, and this property can be used to date them, provided they have been heated sufficiently and have remained *in situ* since heating (Batt 2013). Vitrified material provides a good candidate for archaeomagnetic dating due to the high temperatures achieved during vitrification. Nine heated blocks of vitrified stone from the rampart core in Trenches 4 and 5, on the east and west sides of the summit respectively, were oriented on site and sub-sampled with a diamond rock saw at Lancaster University, before being analysed at the University of Bradford's archaeomagnetic laboratory.

The natural remanent magnetisations of 80 specimens were measured on the Minispin spinner fluxgate magnetometer and the results plotted on a stereographic plot (Fig. 3.1) with each sampled block represented by a different symbol. Alpha-95 (Fisher 1953) is plotted for each sample, showing the 95% probability that the true direction lies within that cone of confidence (Table 3.1). An alpha-95 value of less than 5° is usually required for dating purposes (Zananiri *et al.* 2007). While the measurements from single blocks group well (with the exception of TH2 and TH9), different blocks display very different mean magnetic directions, as demonstrated by the large alpha-95 value for the overall sample based mean. Alternating field demagnetisation using a Molspin demagnetiser of a number of pilot samples showed that the magnetic directions are very stable and are likely to record the vitrification event.

The analysis indicated that the material sampled had been heated but was no longer in the position in which it was last heated. This may indicate that the material was heated elsewhere and then moved

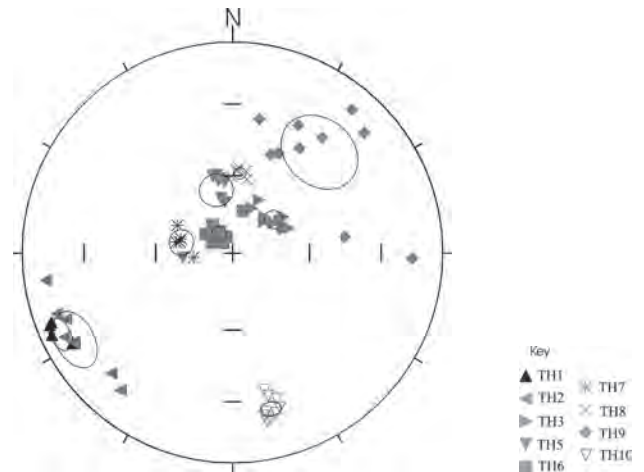


Fig. 3.1. Stereographic plot of the directions of natural remanent magnetisation of all specimens (declination plotted as angle from north, inclination as distance from perimeter to centre), showing uncertainty at 95% confidence for each block

Table 3.1 Mean magnetic directions for each sampled block and their uncertainty at alpha-95

Sample No.	No. specimens used in mean	Mean Declination (°)	Mean Inclination (°)	Alpha-95(°)
TH1	5	244.9	10.1	5.1
TH2	8	241.4	15.1	9.3
TH3	10	50.7	69.5	3.6
TH5	12	345.0	64.8	6.4
TH6	14	324.7	80.8	2.9
TH7	5	282.2	69.6	4.8
TH8	6	4.8	58.8	2.3
TH9	11	40.6	36.4	14.4
TH10	9	166.3	-24.8	3.3
Sample based Mean	N/A	275.3	77.1	46.2

Table 3.2 Calibrated radiocarbon dates from Trusty's Hill

Lab code	Context	Feature	Species	Years BP	$\delta^{13}\text{C}$ (‰)	Calibrated 1 sigma	Calibrated 2 sigma
SUERC-41590 (GU28020)	2007	Primary fill of rock-cut basin	<i>Corylus</i> (Waterlogged wood)	1300±30	-29.4‰	AD 668–767	AD 661–773
SUERC-41591 (GU28021)	4002	Backfill deposit	<i>Corylus</i> (Charcoal)	1465±30	-25.7‰	AD 574–632	AD 551–646
SUERC-41592 (GU28022)	4007	Dark soil deposit	<i>Corylus</i> (Charcoal)	1485±30	-25.1‰	AD 551–610	AD 536–646
SUERC-41596 (GU28023)	4008	Occupation deposit	<i>Corylus</i> (Charcoal)	1590±30	-25.4‰	AD 426–533	AD 411–543
SUERC-41597 (GU28024)	4016	Construction deposit	<i>Corylus</i> (Charcoal)	1510±30	-27.2‰	AD 539–600	AD 529–623
SUERC-41598 (GU28025)	5014	Dark soil deposit	<i>Corylus</i> (Charcoal)	1495±30	-27.0‰	AD 547–602	AD 533–643
SUERC-41599 (GU28026)	5017	Construction deposit	<i>Corylus</i> (Charcoal)	2345±30	-26.2‰	415–383 BC	513–378 BC
SUERC-41600 (GU28027)	5018	Rampart core	<i>Corylus</i> (Charcoal)	1485±30	-27.6‰	AD 551–610	AD 536–646
SUERC-41601 (GU28028)	5022	Post-hole fill	<i>Alnus</i> (Charcoal)	2350±30	-26.6‰	416–386 BC	515–381 BC

for incorporation into the feature or that it had slumped significantly since heating. If either of these scenarios are the case, the feature cannot be dated by archaeomagnetic directional studies as the material is no longer in the position in which it was fired. Recently, regional models for Europe have been published including the intensity of the geomagnetic field (Pavón-Carrasco *et al.* 2009; Hervé *et al.* 2013). Material does not need to be *in situ* to be dated using this magnetic parameter and therefore the samples may be datable in future but, at present, dating with magnetic intensity is not sufficiently developed in the UK.

Radiocarbon dating and bayesian modelling

Derek Hamilton

All of the samples submitted for radiocarbon dating consisted of single-entity short-lived material (Ashmore 1999) and were submitted to the Scottish Universities Environmental Research Centre to be measured by Accelerator Mass Spectrometry (AMS).

The samples were pre-treated following Stenhouse and Baxter (1983), and combusted as described in Vandeputte *et al.* (1996) with the graphite targets prepared and measured following Xu *et al.* (2004). The SUERC laboratory maintains rigorous internal quality assurance procedures, and participation in international inter-comparisons (Scott 2003) indicate no laboratory offsets; thus validating the measurement precision quoted for the radiocarbon ages.

A Bayesian approach was adopted for the interpretation of the chronology (Buck *et al.* 1996).

Although the simple calibrated dates in Table 3.2 are accurate estimates of the dates of the samples, it is the dates of the archaeological events represented by those samples, which are of interest. In the case of Trusty's Hill, it was the overall chronology of the use of the fortified summit area – when did it begin; when did it end; and for how long was it in use – that was under principle consideration, not necessarily the dates of any individual samples. The principal question the Bayesian analysis addressed was: can occupation of the summit during the early medieval period be refined to specific decades within the fifth to mid-seventh centuries AD? The dates for this activity can be estimated not only using the absolute dating information from the radiocarbon measurements on the samples, but also by using the stratigraphic relationships between samples.

Fortunately, methodology is now available which allows the combination of these different types of information explicitly, to produce realistic estimates of the dates of archaeological interest. It should be emphasised that the posterior density estimates produced by this modelling are not absolute. They are interpretative estimates, which can and will change as further data become available and as other researchers choose to model the existing data from different perspectives.

The technique used is a form of Markov Chain Monte Carlo sampling, and has been applied using the programme OxCal v4.1. Details of the algorithms employed by this programme are available from the on-line manual or in Bronk Ramsey (1995; 1998; 2001; 2009). The algorithm used in the model described below can be derived directly from the model structure shown in Figure 3.2.

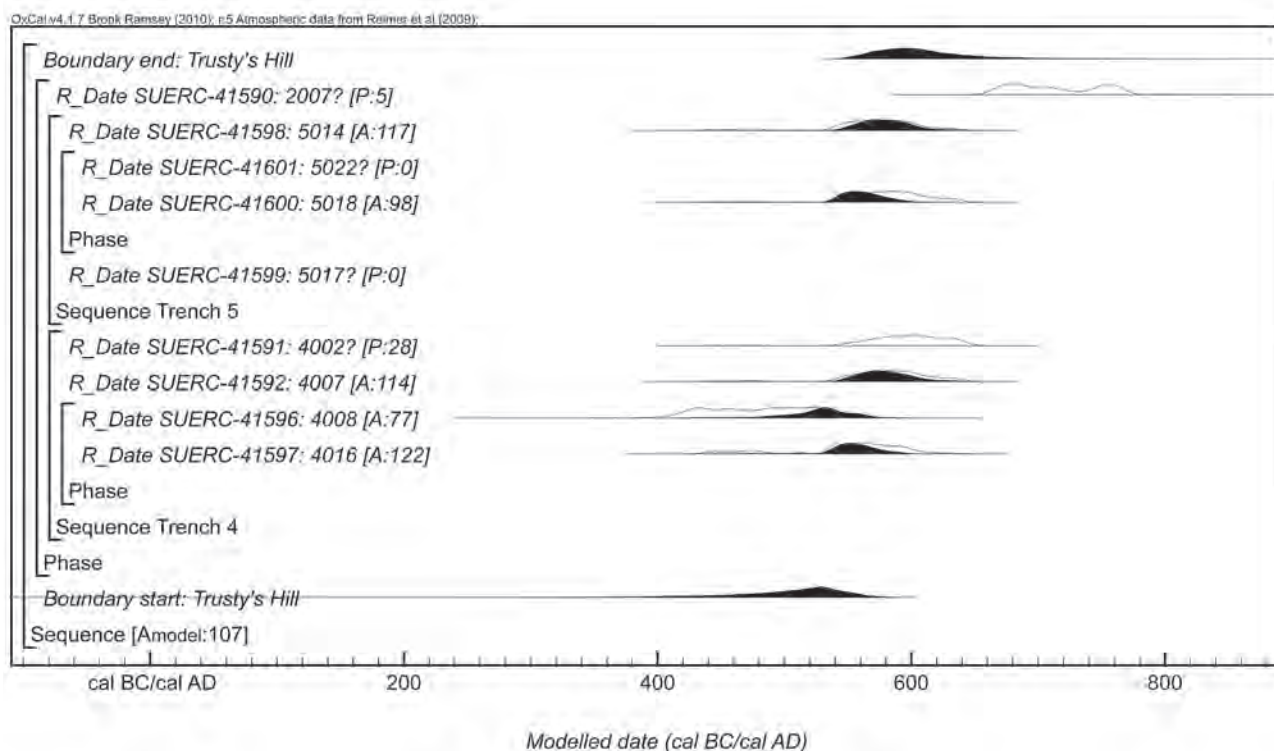


Fig. 3.2 Chronological model for Trusty's Hill. Each distribution represents the relative probability that an event occurred at some particular time. For each of the radiocarbon measurements two distributions have been plotted, one in outline, which is the result of simple radiocarbon calibration, and a solid one, which is based on the chronological model used. The distributions correspond to aspects of the model. For example, 'start: Trusty's Hill' is the estimated date that activity began on the summit of the site, based on the radiocarbon dating results. The large square 'brackets' along with the OxCal keywords define the overall model exactly

The radiocarbon results given in Table 3.2 are conventional radiocarbon ages (Stuiver & Polach 1977), quoted according to the international standard set at the Trondheim Convention (Stuiver & Kra 1986), and calibrated with the internationally agreed curve of Reimer *et al.* (2009) using OxCal v4.1 (Bronk Ramsey 1995; 1998; 2001; 2009). The date ranges in Table 3.2 have been calculated using the maximum intercept method (Stuiver & Reimer 1986). The probability distributions seen in Figures 3.2, 3.3 and 3.4 were obtained by the probability method (Stuiver & Reimer 1993).

Results

AMS radiocarbon dates were obtained from eight single-entities of short-lived charcoal and one single entity of short-lived waterlogged wood from a variety of excavated deposits on the summit and entranceway of the hillfort (Table 3.2). A sample of sooting from under the rim on the exterior of the E ware sherd (SF 114), recovered from the dark soil layer (4007) abutting the rampart core on the eastern side of the summit, was also submitted for radiocarbon dating to provide a date for the E ware

vessel independently of the context. However, the sample taken, which represented the entirety of sooting from under the exterior of the rim of the sherd, failed to provide sufficient carbon for an AMS measurement.

A calibrated radiocarbon date of AD 536–646 (SUERC-41592) was recovered from the dark soil deposit (4007) in Trench 4 that abutted the vitrified rampart along the east side of the summit of the fort. This was matched by a date of AD 533–643 (SUERC-41598) from the corresponding dark soil deposit (5014) in Trench 5 that abutted the rampart on the western side of the summit. Calibrated dates from beneath the summit rampart included AD 529–623 (SUERC-41597) from the east side (4016) and 513–378 BC (SUERC-41599) from the west side (5017). Another Iron Age date of 515–381 cal BC (SUERC-41601) was recovered from the base of a structural post-hole (5022) within the rampart at the west side though a lens of material (5018) from the core of the rampart above this yielded a calibrated date of AD 536–646 (SUERC-41600). One of the occupation deposits (4008) in the south-west corner of Trench 4 on the east side of the summit provided a calibrated radiocarbon date of AD 411–543 (SUERC-41596),

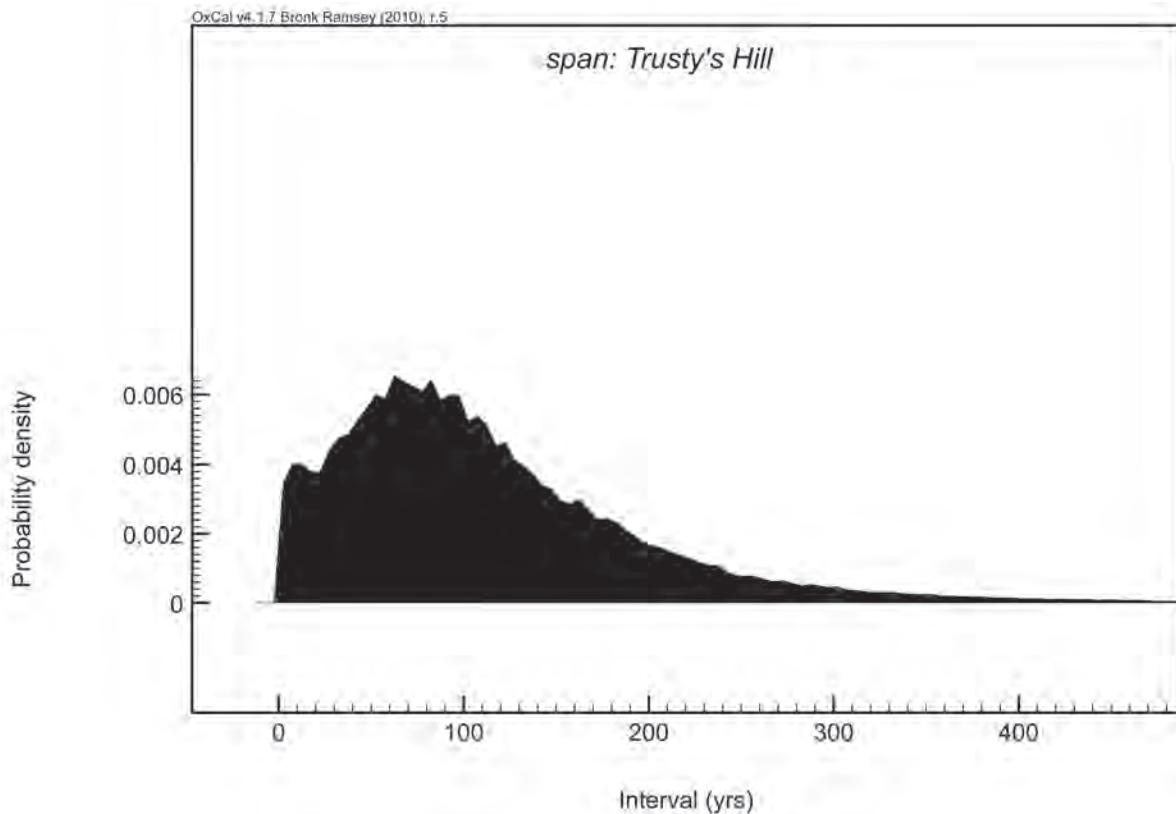


Fig. 3.3. Probability distribution for span: Trusty's Hill. The probability is derived from the modelling shown in Fig. 3.2

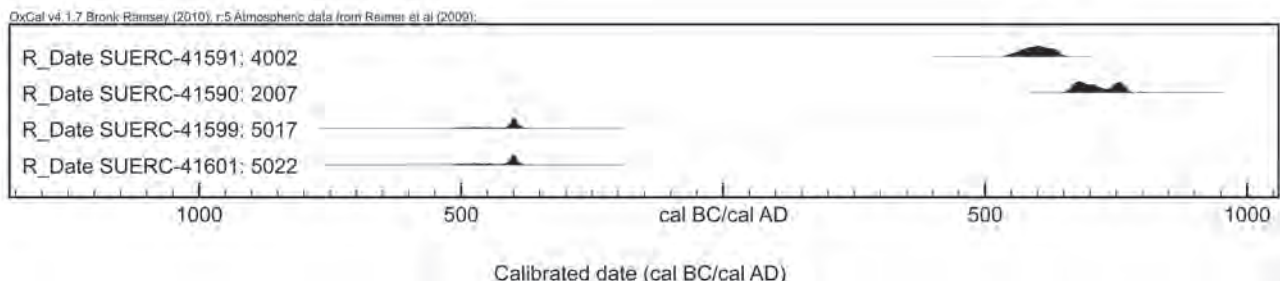


Fig. 3.4. Calibrated radiocarbon dates for results that have been excluded as some part of the chronological modelling of the site

while the backfill soil (4002) from Charles Thomas' excavation of Trench 4 yielded a calibrated date of AD 551–646 (SUERC-41591). A piece of hazel wood (SF 121) taken from the waterlogged primary fill of the rock-cut basin in Trench 2 at the opposite side of the entranceway to the Pictish carvings was radiocarbon dated to AD 661–773 (SUERC-41590).

The single result (SUERC-41590) from the primary fill of the rock-cut basin in Trench 2 was excluded from the Bayesian analysis because this feature was likely open for longer than the summit fort. One of the results (SUERC-41591) from Trench 4 on the east side of the summit, was also excluded from the Bayesian modelling because the material (4002) from which the single entity sample was drawn comprised the backfill from Thomas' excavations and so was

not strictly *in situ*. Two of the results (SUERC-41599 and SUERC-41601) from samples recovered from Trench 5 on the west side of the summit were also excluded from the Bayesian modelling as these were substantially earlier than the mid-first millennium AD activity under analysis here and likely derived from residual material included in the deposit.

The model (Fig 3.2) estimates that the dated activity on the summit of Trusty's Hill began in *cal* AD 375–580 (95% probability; Fig 3.2), if not probably *cal* AD 475–560 (68% probability). The dated activity associated with the occupation of the summit ended between either *cal* AD 545–710 (95% probability; Fig 3.2) and *cal* AD 560–630 (68% probability). The total span of dated activity was between 1–295 years (95% probability; Fig 3.3) and 1–140 years (68% probability).

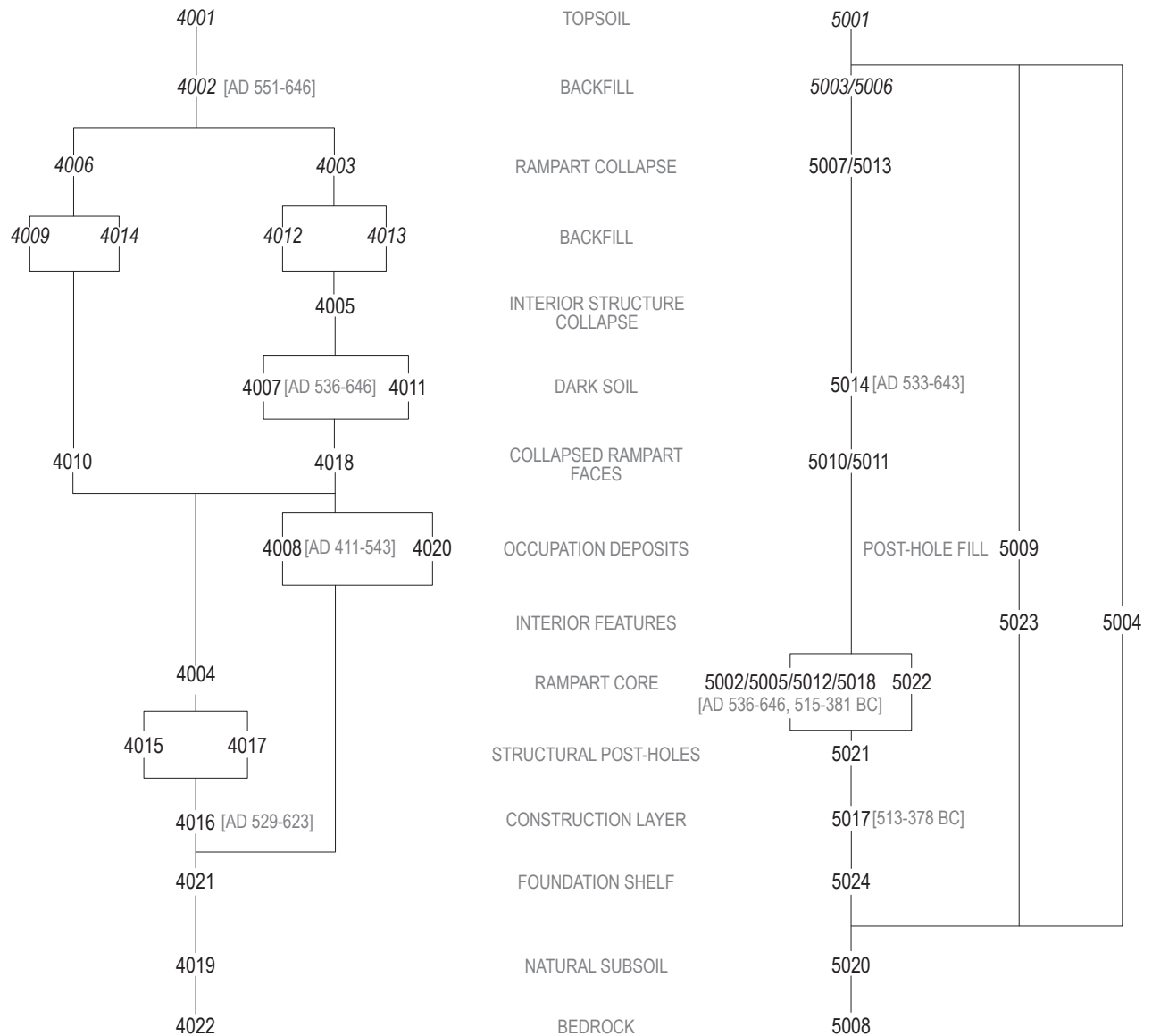


Fig. 3.5. Combined Harris matrices incorporating calibrated (2-sigma) radiocarbon dates for the stratified sequence of contexts in Trenches 4 and 5

Discussion

Derek Hamilton, Ronan Toolis and Chris Bowles

The simple calibrated dates in Table 3.2 indicate initial occupation of Trusty's Hill around 400 BC. However, it is unlikely that the timber-laced rampart enclosing the summit originates from this time, as an early sixth–early seventh century AD date was obtained from the construction layer beneath the rampart on the east side, and another early sixth–mid-seventh century AD date was taken from the vitrified rampart itself on the west side (Fig. 3.5). The likeliest explanation for the presence of Iron Age material, which was found solely within the foundation trench of the vitrified rampart on the west side, is that it is residual, probably having been

swept up from a discrete part of the interior of the site and laid out as a bed of material for the timber frame and stone core of the rampart. The Iron Age occupation of Trusty's Hill appears to have been followed by a hiatus of almost a millennium before the hill was re-occupied around the beginning of the sixth century AD and fortified with a newly constructed timber-laced rampart around its summit (Fig. 3.5). This rampart along with any structures across the summit was destroyed at some point between the middle of the sixth century and the middle of the seventh century. The single radiocarbon date taken from the primary fill of the rock-cut basin, that lies opposite the Pictish Carvings, demonstrates that the use of the rock-cut basin continued into the late seventh–late eighth century, long after the destruction

of the fort. Given that no material from the summit yielded contemporary radiocarbon dates and that the gateway as well as the rampart enclosing the summit was also very likely destroyed before the middle of the seventh century, it is probable that, on the basis of the current evidence, this phase of activity was discretely concentrated to this feature alone.

The chronology of the occupation of the summit can be further refined by the Bayesian chronological model (Fig 3.2). This shows close agreement between the radiocarbon dates and the archaeological finds evidence (see Chapter 4) providing robust estimates for the start, end, and overall duration of activity associated with the dated and modelled contexts. Although there were nine radiocarbon dates available from the site as a whole, only a subset of five dates could be used in the Bayesian model. So, while the modelling provides a robust estimate, the low number of samples produced date estimates that are less precise than possible (Steier & Rom 2000). The 68% probability ranges provided by the modelling are likely to provide more realistic estimates for the occurrence of the modelled events. It is therefore possible to state from the radiocarbon dating evidence alone that the fortified summit of Trusty's Hill was occupied between *cal AD 475–560* and *cal AD 560–630*.

This date range for the fortification of the summit can be refined perhaps to the late sixth–early seventh century by the bulk of datable artefacts recovered from the summit deposits, such as the E-Ware pottery sherd and the decorated metalwork (see Chapter

4). A compressed time span around AD 600 for the hilltop citadel is supported by the corresponding stratigraphic sequences of near identical deposits evident at both the eastern and western sides of the summit (Fig. 3.5). These indicate essentially one phase of occupation during the early medieval period with little sign of the accumulation of deposits or the repair and replacement of features that one might expect from a prolonged occupation of the summit, at least during the lifespan of the timber-laced rampart. However, the deposition of occupation material in the foundation trench for the rampart indicates that the interior of the summit was scoured prior to the construction of the timber-laced rampart. This may have removed not only earlier Iron Age occupation deposits from the interior of the summit, but also occupation deposits from earlier in the sixth century AD, as apparent from the radiocarbon dates extracted from the construction layer and rampart core on the west side and the construction layer on the east side of the summit. It therefore seems that at some point during the latter part of the early medieval phase of occupation, the timber-laced rampart was constructed around the summit of the hill. It is not possible to demonstrate stratigraphically whether this was prior to or subsequent to some of the occupation deposits encountered (Fig 3.5). However, the destruction of the rampart at some point no later than the early seventh century certainly appears to have signalled the end of the early medieval occupation of the summit of Trusty's Hill.

The artefacts

Ceramics

Ewan Campbell

Imported pottery

Early medieval imported pottery is represented by the rim of a small E ware jar (SF 114; Fig. 4.1) recovered from Trench 4 dark soil deposit (4007) on the eastern side of the summit. The small rim diameter shows that this jar belongs to Campbell's Form E1c (Campbell 2007, fig. 21). Rim forms of E ware jars are very variable, but the Trusty's Hill vessel is very similar to examples from the early excavations at Dunadd (*ibid.*, fig. 36, E60) and Loch Glashan (Crone & Campbell 2005, 2, fig. 32). The latter vessel was directly dated from sooting residues to cal AD 420–640 (*ibid.*, 113, table 3). An attempt to obtain a similar date from sooting residues on the E ware sherd from Trusty's Hill failed due to insufficient material. But the context provided a date of cal AD 536–646 (SUERC-41592), which ties in with similar dates obtained for E ware from other sites that show a range of later sixth–early seventh centuries for its main period of importation (Campbell 2007, 46). Although the sooting on the vessel suggests use in a domestic sphere, evidence from other sites suggests that this type of usage is secondary, and that the primary function was as containers for the importation of exotic materials such as spices, dyes, and foodstuffs. The chemical analysis of residues from the Trusty's Hill sherd (SF 114) suggested animal fats were present, particularly on the inner surfaces (see Stern below). Again, this suggests secondary reuse of some sort, though the vessel seems too small to have been used as a cooking pot. On other sites, as at Trusty's Hill, E ware is often found associated with metalworking deposits. While this may be due to secondary dumping of midden material in 'dirty' areas of sites, there are instances where vessels appear to have been re-used



Fig. 4.1. Samian and E ware pottery rim sherds from Trusty's Hill

in industrial processes (Crone & Campbell 2005, 57). The close similarity of the E ware rim (SF 114) form from Trusty's Hill to vessels from Dunadd and Loch Glashan in Argyll strongly suggest that these sites were in occupation at the same time and linked through the same economic trading system.

The significance of E ware extends well beyond its importance in the chronology of sites which often are otherwise difficult to date. The pottery was manufactured in western France and widely distributed in Atlantic Britain and Ireland (Fig. 4.2). In Southern Scotland, the major sites are Whithorn (Campbell 1997) and Mote of Mark (Laing & Longley 2006). Concentrations of E ware are found on a series of high status sites, many of which have documented royal connections. It has been suggested that these royal sites represent primary importation centres, in

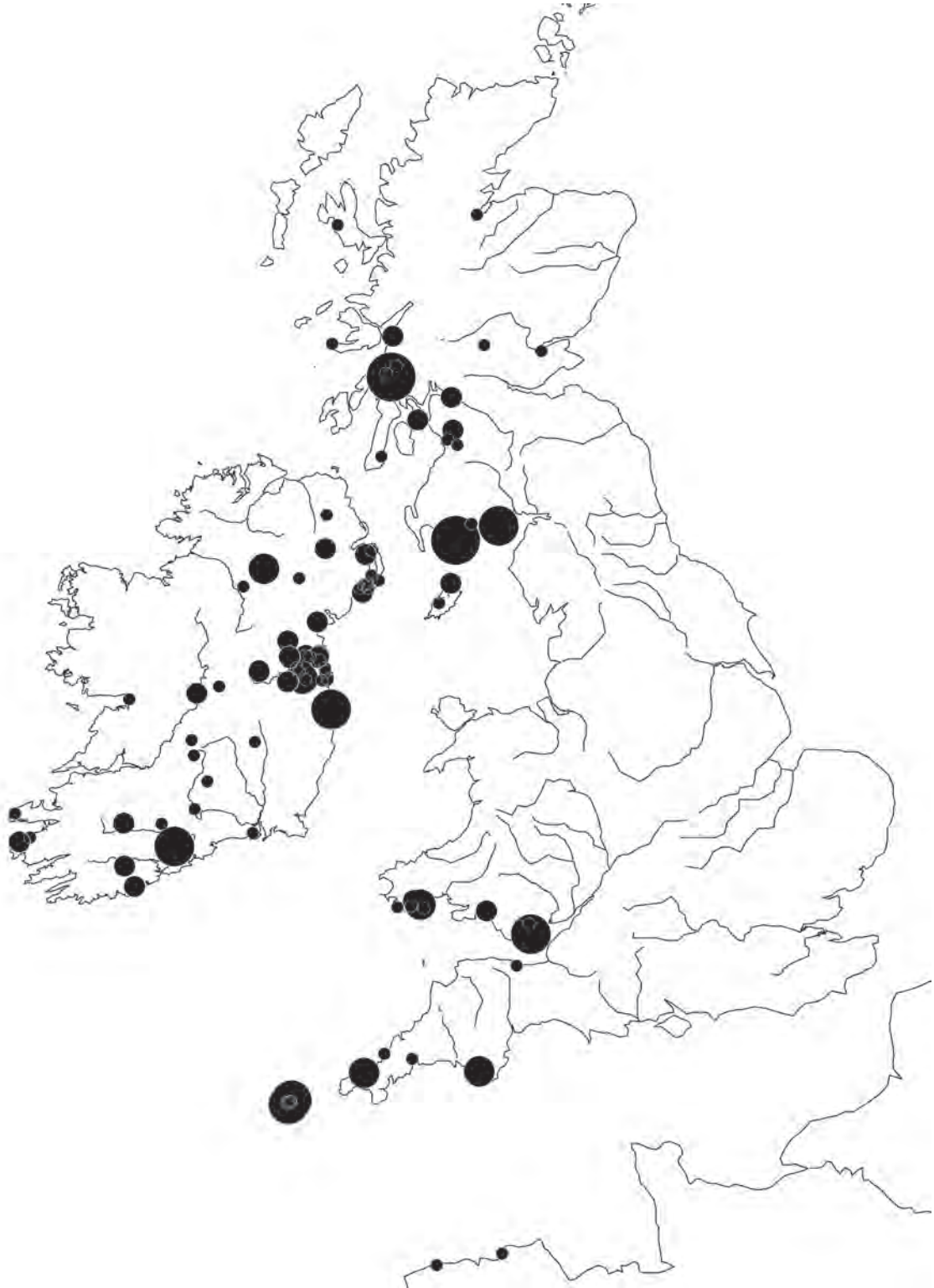


Fig. 4.2. Distribution of E ware (size of symbol proportional to number of vessels)

direct maritime contact with Merovingian Gaul, and that the pottery (along with other imported goods) were redistributed from these sites by gift exchange to client sites (Campbell 2007). Although Trusty's Hill has only produced one E ware vessel so far, the excavations have been restricted in scale, and

the site shares many characteristics of these royal re-distributive centres such as Dunadd (Campbell 1996, 85, Table 4.1).

SF 114 Rim sherd of small jar, rim everted, rounded with exterior lip and internal lid-seat (Fig. 4.3). The form is E1c. Sooted on exterior, covering usage spall on rim,

Table 4.1 Data for Pb isotope composition from lead bar (SF 186)

sample	206Pb/ 204Pb	SD % 1 σ	207Pb/ 204Pb	SD % 1 σ	208Pb/ 204Pb	SD % 1 σ	207Pb/ 206Pb	SD % 1 σ	208Pb/ 206Pb	SD % 1 σ
3309_189_4011	18.3043	0.003	15.6188	0.0006	38.3076	0.003	0.8533	0.0011	2.09280	0.0011

Ceramics

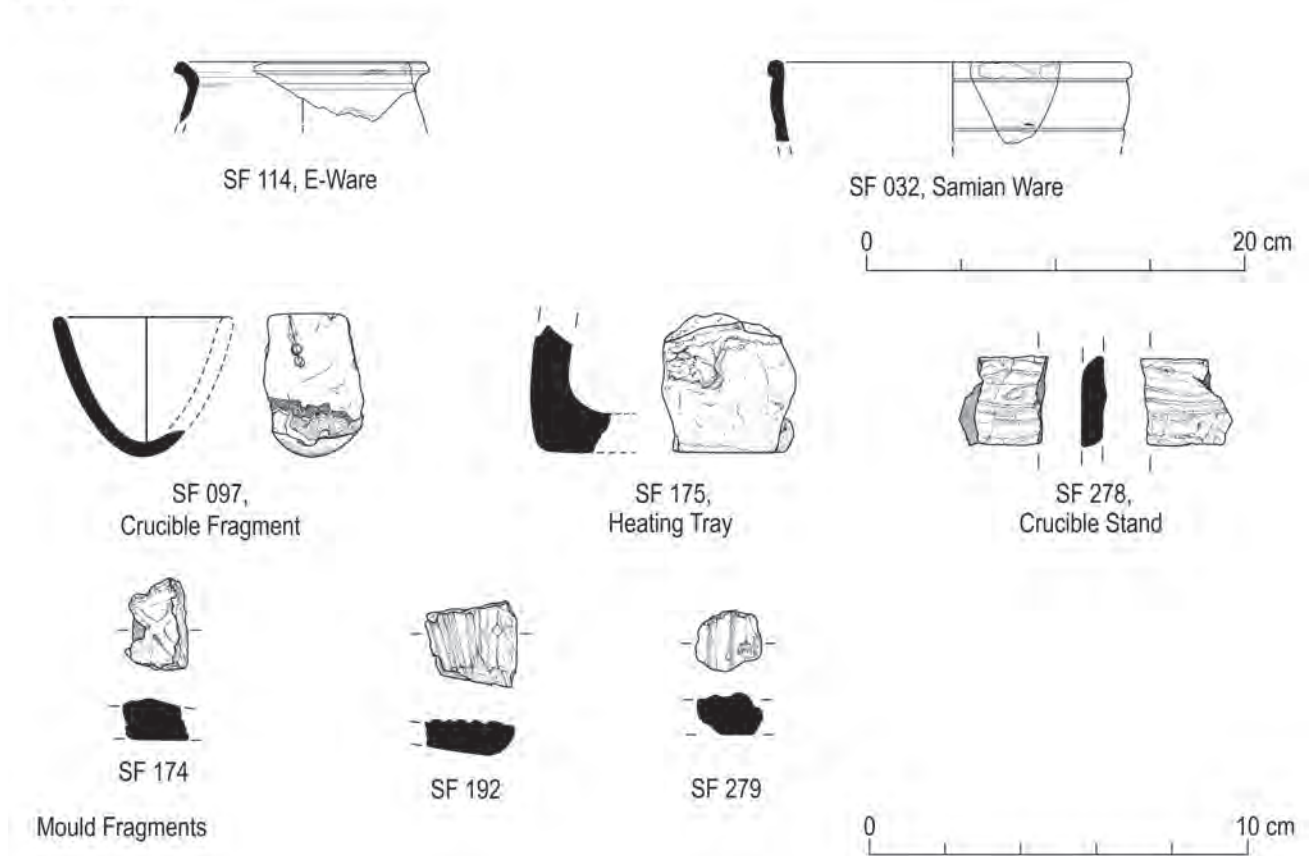


Fig. 4.3. Ceramics from Trusty's Hill

not abraded. Fabric medium hard, heavily gritted with sub-angular clear and white quartz with rounded iron ore, poorly sorted, up to 5mm. Colour grey/buff/pink/buff. Size 85 × 35 mm, T 5 mm, Rim *diam.* 13 cm. Context 4007, Trench 4.

Roman pottery

The sherd of samian pottery (SF 032) from Trench 5 dark soil deposit (5014) on the western side of the summit is easily identifiable as coming from the rim of a bowl of Form Dragendorff 37 (Fig. 4.1), one of the commonest forms found in Britain from the late first–early third centuries AD. The lower parts of these bowls have relief decoration which would enable a closer dating, but this part is missing on the Trusty's Hill sherd. The only clue to its date is that the plain band below the rim is relatively wide, suggesting it is not early in the series, and is probably of second

century AD date. The fabric suggests a Central Gaulish, Lezoux place of manufacture. Such pottery was abundantly imported to Roman Britain and is found extensively on Roman urban and military sites. However, it is also found more widely distributed on native sites outwith Roman contexts in Scotland, where it is one of the commonest types of Roman artefact (Campbell 2011). In these native Iron Age contexts, samian pottery is found widely in eastern Scotland, with fewer sites in the west, and most of these are in coastal locations (*ibid.*, fig. 6.12). Around a dozen sites along the northern shore of the Solway Firth have produced small numbers of samian sherds, and where these can be identified, most of them are of Form Dragendorff 37 as is the Trusty's Hill sherd. Most sites have only one sherd, but a few such as Whithorn, Torrs cave and High Torrs cairn have a handful.

While on many sites this samian pottery can be shown to be found in Roman Iron Age contexts, on others the context is early medieval. This later use of the material can be seen at sites such as Dumbarton Castle (Alcock & Alcock 1990, 115; Alcock *et al.* 1992) and the Mote of Mark (Laing & Longley 2006, 125), and probably represents a deliberate useage of material collected from abandoned Roman sites, rather than residual material from Roman period occupation of the site. There is however, some debate around this issue. For example, the Whithorn material is seen as evidence of an otherwise invisible Roman period occupation of the site (Hill 1997, 27 & 293). It is noticeable that a number of important early medieval hillfort sites with royal associations (Dunadd, Dumbarton, Mote of Mark, Dinas Powys) have produced similar samian sherds. In the case of the Mote of Mark, the sherd is rubbed down in a similar manner to that at Trusty's Hill, which is rubbed down on one edge. This is also a feature of the large collection of samian sherds from Traprain Law (Campbell 2011, 337). All these sites are important metalworking centres, and it has been suggested that the ground down samian has been used as jeweller's rouge for polishing metal artefacts (Campbell 1991, 59).

SF 032 Rim sherd of samian bowl (Form Dragendorff 37). Beaded rim with wide plain band above a band of ovolo decoration (Fig. 4.3). The exterior of the rim is spalled, and the sherd is badly abraded. One edge has been rubbed smooth with a convex profile. Size 48 x 43 mm, T 7 mm. Rim diam. c. 20 cm. Context 5014, Trench 5.

Metalworking ceramics

There was a variety of evidence for fine metalworking recovered from Trusty's Hill including crucibles, heating trays, moulds, furnace lining and a possible crucible stand (Figs 4.3–4.5). This evidence shows that the site was producing decorative jewellery in a workshop similar to those at the well-known contemporary sites of Dunadd in Argyll (Lane & Campbell 2000), the Brough of Birsay in Orkney (Curle 1982), Clatchard Craig in Fife (Close-Brooks 1986) and the Mote of Mark in Galloway (Laing & Longley 2006). These sites, and a newly discovered site at Rhynie (Noble & Gondek 2011), lie in different cultural areas of early medieval Scotland (Gaelic, Pictish and British) and allow us to compare metalworking practices.

MOULDS

The three mould fragments, from the dark soil (4007) on the east side of the summit at Trusty's Hill, are unusual in that they all preserve parts of the objects being cast (Fig. 4.4). Two appear to be from casting multiple pins (SF 192 & 279) laid out in radiating formation similar to those from the Mote of Mark



Fig. 4.4. Mould fragments from Trusty's Hill

(Laing & Longley 2006, 62, fig. 25), but the lack of pinheads means these are undiagnostic. The third mould (SF 174) unfortunately is also undiagnostic, but does have a cross-shaped positive impression of a keying mark, similar to others found in the central portion of brooch moulds. An exactly similar keying device is seen on a recently found mould for a Type H brooch from Rhynie (Noble *et al.* 2013, 1142) and a brooch mould from Clatchard Craig (Close-Brooks 1986, illus. 23, nos 51–2), but is different from the devices used on brooch moulds at Dunadd and Mote of Mark. It has been suggested that these differences are distinctive of individual metalworkers, rather than being culturally diagnostic (Lane & Campbell 2000, 203; Laing & Longley 2006, 35). From comparison with these other examples, the third mould (SF 174) is probably from the production of a brooch, and the traces seen at one edge may be part of a terminal. The mould fragments make it clear that Trusty's Hill was a major metalworking site. The production of fine metalwork is one of the key characteristics of high status sites of the period and it has been suggested that the brooches produced played a central role in cementing client/lord relationships (Neike 1993).

SF 174 Fragment from centre of upper? valve of a mould, with cross in relief (Fig. 4.3). One edge has part of the object being cast, but too little survives to be diagnostic. 24 x 16 x 10 mm. Context 4007, Trench 4.

SF 192 Fragment of upper valve of a mould with edge



Fig. 4.5. Crucible fragments from Trusty's Hill

and impression of four radiating round-sectioned channels (Fig. 4.3). One positive triangular key mark. Fabric fine, cream to buff. 25 × 24 × 8 mm. Context 4007, Trench 4.

SF 279 Fragment of lower valve of a mould with edge and impression of two rectangular-sectioned channels 3mm wide (Fig. 4.3). One negative keying mark. Fabric cream to grey. 17 × 16 × 10 mm. Context 4007, Trench 4.

CRUCIBLES AND OTHER METALWORKING CERAMICS

The crucible fragments mainly belong to small to medium-sized triangular crucibles (Fig. 4.3 & 4.5), a long-lasting type found from the Iron Age to early medieval periods. In this, the assemblage is similar to that from the Mote of Mark, but differs from that at Dunadd and the Brough of Birsay, where there are many handled and lidded forms. As with the keying patterns on the moulds, these differences in metalworking practices do not seem to be related to cultural or ethnic divisions. XRF analysis shows that the metals being cast were mainly leaded bronzes, though one (SF 106) also showed silver (see Cruickshanks & Hunter below). The relative lack of

zinc is characteristic of Atlantic sites where there was little re-use of Roman brasses. At Dunadd, silver was mainly found in lidded forms of crucible, but this was not consistent (Lane & Campbell 2000, 206).

Other metalworking ceramics were represented by a 'dog-bowl' shape (SF 175; Fig. 4.3), classified as Type B3 at Dunadd (Lane & Campbell 2000, 135, illus. 4.40). This ceramic was lower-fired than the crucibles, with a band of external vitrification suggesting the former presence of a lid (*cf.* Laing & Longley 2006, fig. 16). XRF analysis showed gold and silver as well as copper (see Cruickshanks & Hunter below). It has been suggested that this type of item was used in the refining of precious metals, or 'parting' (Bayley 1991). One unique item is a crucible stand (SF 278; Fig. 4.3) which may have been used within a furnace. Items of similar function are known from elsewhere, such as Mote of Mark (Laing & Longley 2006, 28, fig. 16, 1274).

Substantial portions of individual crucibles were found in the dark soil deposit (4007) on the east side of the summit and construction layer (5017) and a lens of the rampart core (5018) on the west side of the

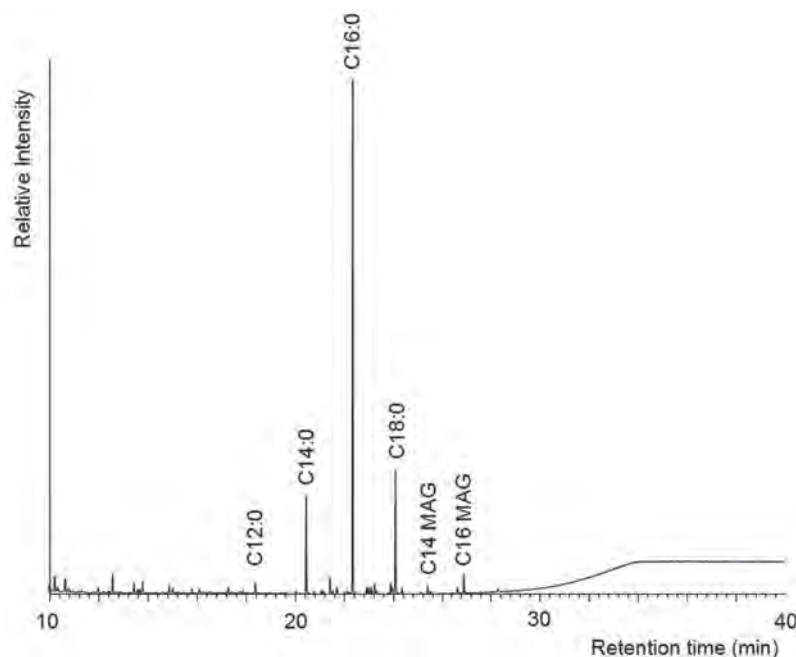


Fig. 4.6. Total ion chromatogram of the extract of the external surface

summit, suggesting metalworking took place nearby these locations. The presence of gold and silver in metalworking is characteristic of royal sites in the Atlantic West (Campbell & Heald 2007), reinforcing the picture of Trusty's Hill as a high status site. The quantities of non-ferrous metalworking debris at Trusty's Hill are not large compared to sites such as Dunadd or the Mote of Mark, but both sites have shown that this type of material is concentrated in small areas of sites (Laing & Longley 2006, 81, fig. 37), so the focus of metalworking may have been missed by the limited trenches excavated at Trusty's Hill.

SF 037 Small thick-walled sherd vitrified, with thick deep red enamel internally. 30 × 22 mm, T 8 mm. Context 4002, Trench 4.

SF 087 Rim of small crucible with internal red enamel. Probably same vessel as SF 162. Context 4007, Trench 4.

SF 097 Two joining sherds giving complete profile of medium-sized crucible (Fig. 4.3). Exterior base and whole interior vitrified with glassy green deposits. Height 42 mm, T 4 mm. Estimated *diam.* c. 5 cm. Exterior vitrified, interior white deposits. Context 5018, Trench 5.

SF 106 Base of small triangular crucible, exterior vitrified, interior black deposits. 26 × 20 mm, T 5 mm. Context 4007, Trench 4.

SF 162 Rim of small thin-walled crucible, with red vitrification covering interior and exterior. 26 × 29 mm, T 4 mm. Context 4007, Trench 4.

SF 169 Rim of small triangular crucible, external and internal vitrification. 22 × 22 mm, T 5 mm. Context 4011, Trench 4.

SF 175 Base and wall of thick 'dog-bowl' heating tray with

inturned wall (Fig. 4.3). Band of vitrification on exterior suggesting possible lid. No internal deposits visible. Fabric soft, with white inclusions, buff/pink. Basal diameter c. 5 cm. Height 35 mm, T 12 mm. Context 4007, Trench 4.

SF 201 Tiny crucible fragment. Context 4010, Trench 4.

SF 202 Tiny crucible? fragments. Context 5018, Trench 5.

SF 203 Five fragments of a medium-sized triangular crucible with pouring lip. Same vessel as SF 097. Vitrification inside and out. Height c. 40 mm, T 2–4 mm. Context 5017, Trench 5.

SF 278 Possible crucible stand (Fig. 4.3). Section of cylindrical ceramic ring with vitrification on all surfaces. Height 23 mm, T 6 mm. Context 4007, Trench 4.

Analysis of E-ware sherd for organic residues by Gas Chromatography-Mass Spectrometry

Ben Stern

A portion of the interior and exterior surfaces of E Ware sherd (SF 114) were separately removed by scraping with a metal spatula. The resultant sub-samples were extracted with ~2 ml dichloromethane:methanol 2:1, v/v, with ultrasonication for five minutes followed by centrifugation (5 min 2000 rpm). Excess *N,O*-bis(trimethylsilyl)trifluoroacetamide with 1% trimethylchlorosilane was added to derivatise the sample which was warmed at 70°C for one hour. Excess derivatising agent was removed under a stream of nitrogen. The samples were diluted in DCM for analysis by combined gas chromatography-mass spectrometry.

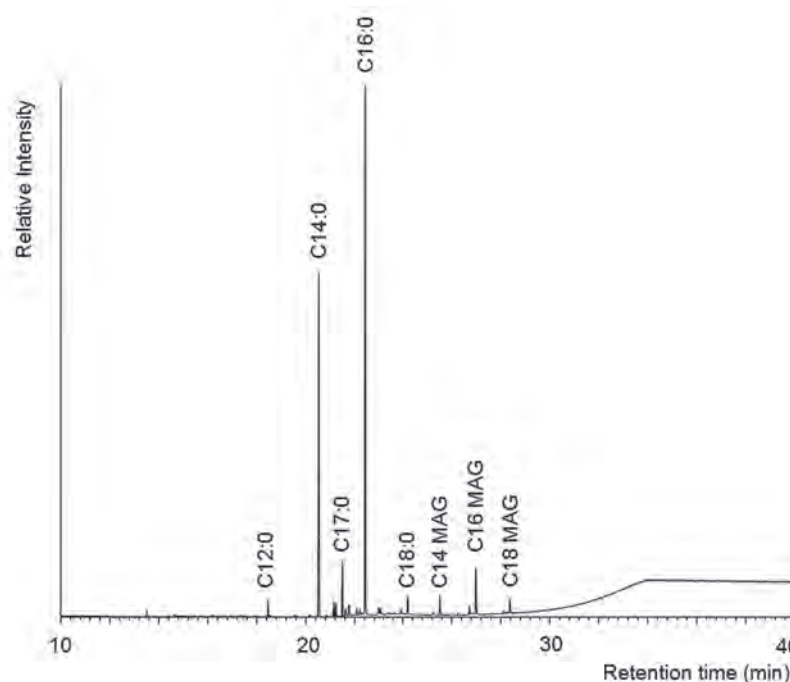


Fig. 4.7. Total ion chromatogram of the extract of the internal surface

Analysis was carried out by combined gas chromatography-mass spectrometry using an Agilent 7890A Series GC connected to an 5975C Inert XL mass selective detector. The splitless injector and interface were maintained at 300°C and 340°C respectively. Helium was the carrier gas at constant flow of 1.4 mL/min. The temperature of the oven was programmed from 50°C (2 min) to 350°C (10 min) at 10°C/min. The GC was fitted with a 15 m × 0.25 mm, 0.25 µm film thickness HP-5MS 5% Phenyl Methyl Siloxane phase fused silica column (Agilent J&W). This analytical column was connected via a Quickswap with a 0.17 m 100 µm ID deactivated capillary which was inserted into the ion source where electron impact (EI) spectra were obtained at 70 eV with full scan from m/z 50 to 800.

The results are presented as chromatograms of the *N,O*-bis(trimethylsilyl)trifluoroacetamide derivatized solvent extracts (Figs 4.6 and 4.7). These show each separated component of the solvent extract as discrete peaks, the area under each peak being representative of the abundance.

Fatty acids and monoacylglycerides with 12–18 carbons were recovered from the interior and exterior surfaces of the E Ware vessel sherd (SF 114). These lipid residues were degraded, as indicated by the absence of the original triacylglycerols and the presence of these breakdown products. In addition, there were odd carbon numbered fatty acids and their branched-chain isomers (not shown on the figures). These are likely to originate from bacterial degradation of the original sample.

The distributions of the fatty acids varied between

the exterior and interior. Notably, the C14 fatty acid was in higher abundance in the interior of the vessel. Although not quantified, the interior surface yielded larger quantities of fatty acids (as would be expected with vessel use). The fatty acids and monoacylglycerides are indicative of a plant oil or animal fat. The relative high abundances of C14 indicates that this was more likely to originate from an animal fat, although there was no further molecular evidence for this.

Metalwork

The copper-alloy mount

Alice Blackwell

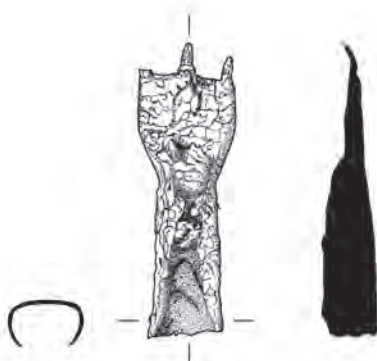
A circular copper-alloy mount (SF 023) was recovered from the backfill (4002) of Trench 4. This mount is decorated on the front with chip-carved Germanic Style II birds' heads arranged around a central boss, with organic remains preserved on the reverse in the region of three copper-alloy attachment lugs (Fig. 4.8).

In places the mount is fairly corroded, but despite this the decoration remains easily legible (Fig. 4.9). The front surface of the mount has a flat, undecorated outer border, around 4 mm in width. Immediately within this are three pairs of simple Style II birds' heads in profile. The heads, all of the same design, consist of a single eye and a long, thin, curved beak, the lower edge of which is marked by rough hatching. The beaks of opposed pairs tuck neatly one above the

Metalwork



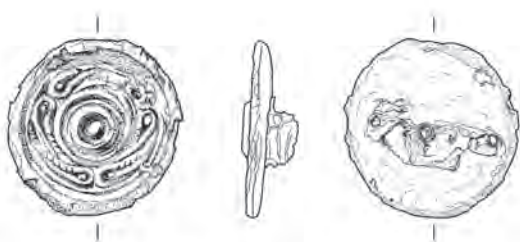
SF 113, Iron
Thistle-Headed Pin



SF 206, Iron Socketed Tool



SF 115, Iron
Vessel Handle



SF 023, Copper-alloy
Anglian Style Horse Mount



SF 186, Lead Strip



SF 036, Iron
Square-Sectioned
Rod Fragment



SF 022, Iron File



SF 016, Iron Disc



Fig. 4.8. Metalwork from Trusty's Hill

other, following the curvature of the mount. Within this register of decoration is a chip-carved ridge surrounding a central, integral boss. The boss has a circular and slightly domed recess in the centre; this appears to be a deliberate feature rather than an empty setting. No traces of gilding are visible, but this is due to corrosion, as X-ray fluorescence analysis detected gold and silver on the front (see Cruickshanks & Hunter below); other similar mounts are usually gilded and some feature both gilding and silvering/tinning.

On the reverse of the mount are three integral copper-alloy attachment lugs, one placed in the centre, with another on either side near the edge of the mount (Fig. 4.8). The central lug is slightly larger in diameter (4 mm) than the two either side of it (both around 3 mm in diameter); its surviving length is also greater (c. 5.5 mm high, versus 2.5 mm and 4 mm). Preserved around the lugs is a mass of material composed of decayed organic remains; little structure is visible within this mass suggesting it is more likely to be leather than wood. Two discrete areas of metal corrosion survive on the exposed surface of the organic remains and appear to result from separate plates or washers attached to the lugs. Around the vicinity of the central lug the remains suggest an iron plate or washer, while around the better preserved of the two outer lugs is the remains of a copper-alloy plate. Although difficult to be certain, it seems that two layers of leather remains are preserved around the central lug only.

The mount is probably best described as Anglo-Saxon, although the nature of Insular art during the early medieval period and in particular the incorporation of chip-carved Germanic Style II motifs into metalwork made in Scotland makes identifying the place of manufacture difficult. Chip-carved style mounts decorated with Style II interlace were, for example, being made at the Mote of Mark in Dumfries and Galloway under some degree of Anglo-Saxon influence (Laing & Longley 2006, 148–51).

This object bears a superficial similarity to Anglo-Saxon cast saucer brooches (Dickinson 1993), but it can nonetheless be confidently identified as a mount. Surviving remains on the reverse of the object are clearly not part of a brooch fastening mechanism – these are of a consistent form among saucer brooches and consist of a pin and loop that, even when missing or damaged, are identifiable by their positions at either edge of the back. Instead the preserved remains on the back of the mount demonstrate it was likely to have been attached to an organic object, probably made of leather, by three lugs. In addition, instead of the characteristic near-vertical edge that forms the lip of the ‘saucer’ on these brooches, the Trusty’s Hill object has a flat border, around 4 mm in diameter.

No exact parallel for the design on the mount has yet been identified although several relevant objects



Fig. 4.9. Copper-alloy horse mount from Trusty's Hill

can be cited. Several chip-carved circular mounts of a similar diameter to the Trusty's Hill example have been recorded by the Portable Antiquities Scheme (PAS) from England. PAS NMS-36DB44 (incomplete, *diam.* 25 mm), which features two Style II chip-carved eagle heads, was suggested to be an applied stud from a great square-headed-brooch but images of the reverse suggest that, although now missing, three points of attachment were originally present, paralleling the arrangement on the Trusty's Hill mount. PAS BUC-24D605 (*diam.* 37 mm) has five integral rivets in a cruciform arrangement on the reverse. The front is decorated with a complex frieze of Style II interlocking creatures that run around the mount and, like the Trusty's Hill example, it has a central copper-alloy annular-shaped boss. PAS BH-5D35E5 (incomplete, estimated *diam.* 35 mm) has a single, centrally-placed surviving integral lug on the reverse, and a frieze of Style II interlocking creatures around a central, domed boss. Two of these mounts, PAS BUC-24D605 and PAS BH-5D35E5, feature both gilding and silvering or tinning (not analysed). In terms of decoration, the two Style II mounts provide the closest parallels and are dated to the late sixth to early seventh century AD on stylistic grounds; a similar date can be suggested for the Trusty's Hill mount.

Flat, circular copper-alloy, chip-carved mounts of varying sizes have tended to be grouped together under the identification 'harness mounts'. The intact remains of a horse harness from Sutton Hoo Mound 17 (Evans 2005, 221–41, figs 109–12) demonstrate that several sizes (and shapes) of mounts could indeed be used in this way and that they could be attached using



Fig. 4.10. Thistle-headed iron pin from Trusty's Hill



Fig. 4.11. Thistle-headed iron pin from Trusty's Hill

various arrangements of rivets to suit the number and orientation of straps to be joined. At Sutton Hoo, larger circular mounts (*diam.* 60 mm, fittings 25a and 25c, figs 111 & 112) joined pairs of bridle straps (from the browband to headband, and from the noseband to headband) using five rivets arranged in a cruciform shape. Smaller, more comparably-sized mounts (fitting 21a, figs 109–10) were attached to the iron snaffle bit but the arrangement of rivets was obscured. Although difficult to interpret with certainty, the remains on the reverse of the Trusty's Hill mount suggest it may have been attached to a primary strap by all three lugs, with a second, less substantial strap attached via the central lug only.

SF 023 Circular copper-alloy mount, possibly from a horse harness (Fig. 4.9); originally gilt and silvered. Decorated with chip-carved Germanic Style II birds' heads arranged around a central boss, with organic remains and metal washers or plates preserved on the reverse in the region of three copper-alloy lugs. Diameter 34–6 mm, thickness *c.* 3.5 mm. Context 4002, Trench 4.

The ironwork

Gemma Cruickshanks and Fraser Hunter

Trusty's Hill produced a small but impressive assemblage of six iron objects (Fig. 4.8). These comprised, from the east side of the summit, a decorative thistle-headed pin (SF 113) from dark soil deposit (4007), a vessel handle fragment (SF 115) from dark soil deposit (4011), a dish-headed mount (SF 016) from the backfilled rampart collapse (4003) and possible blacksmithing debris (SF 036) from backfill (4002) from Thomas' 1960 trench. From the west side

of the summit was recovered a metalworking file (SF 022) from the top lens (5002) of the rampart core and a toothed socketed tool (SF 026) from rampart collapse (5007). The pin and toothed tool are both early medieval types. The other objects are not chronologically distinct but are in keeping with this date. The high quality of the ironwork assemblage, especially given the small scale of excavations, is a good indication of the importance of the site.

The most impressive iron object is the finely crafted thistle-headed pin (SF 113; Figs 4.10 and 4.11). Decorated iron pins are rare, probably due to the difficulty in decorating iron compared to copper alloy or bone/antler, which were easier to either cast or carve into intricate shapes. Hammering this small object into such a fine shape, incising the decoration and inlaying the copper alloy required an immense amount of skill as a metalworker and the owner of such an object is likely to have been of a high status. Thistle-headed pins can be paralleled in bone from Broch of Burrian (MacGregor 1974, 72, fig. 5, 24) and in a mould fragment from the Mote of Mark (Laing & Longley 2006, 61, fig. 24). Decorative bands are found on early medieval pin shanks of varying forms (*e.g.* see Stevenson 1955, 286, fig. A). Though the form of head, swollen shank and decorative bands of the Trusty's Hill pin can all be paralleled in the early medieval period, it is the rare choice of material, iron, which makes it particularly special. The only comparably decorated iron pin from Scotland known to the authors is a drum-headed pin from Howe in Orkney, which has copper alloy inlays on the head and incised decorative bands with inlays around the swollen shank (Ballin Smith 1994, 217–8, fig. 130). This form of pin has traditionally been dated to no

earlier than the seventh century AD (Foster 1990, 151; Stevenson 1955, 286, fig. A, 11) though the Howe pin is from a context dating to between the fourth and seventh centuries AD, suggesting a longer currency.

The two tools (SF 026 & SF 022) reveal some of the craft activities which were taking place at the site. The function of triple-toothed socketed tools has been reviewed and discussed elsewhere (e.g. see Hunter forthcoming a; Laing 1975, 296; Nicholson 1997a, 425) and remains enigmatic, although it seems likely they were used in textile manufacturing or leather working. The type has secure early medieval parallels throughout western Britain and is therefore in keeping with the site's date and location. Local parallels include a group of seven from Whithorn (Nicholson 1997a, 425). The file was a metalworker's tool, differentiated from files for organic materials by the fineness of the teeth (Manning 1985, 11). This complements other evidence for metalworking from the site, including the metalworking ceramic debris (see Campbell above), lead ingot (see Cruickshanks & Hunter below) and iron bar fragment (SF 036), which is likely to be blacksmithing debris. Metalworking was also a prominent activity on the contemporary local hillfort at the Mote of Mark (Laing & Longley 2006, 168).

The two fittings, the dish-headed mount (SF 016) and vessel handle (SF 115), were once attached to organic materials, probably leather and wood respectively. The dish-headed mount is unusual and no parallels have been located, but the vessel handle is a commonly found, everyday item with a long chronological span from the Iron Age onwards and may have been attached to a metal or organic vessel.

SF 016 Dish-headed iron mount (Fig. 4.8). Short, round-sectioned shank with blunt tip expands into dish head. This is likely to have been a decorative mount on a leather or wooden object. L 7 mm; head D 25 mm, T 3 mm; Shank L 12 mm, T 6.5 mm. Context 4003, Trench 4.

SF 022 Iron File (Fig. 4.8). The rectangular-sectioned bar swells slightly in the middle. Both ends are broken. Fine teeth can be seen on one side with traces on the edges too. They were probably on all sides but are now mostly obscured by corrosion. L 110 mm, W 10.5 mm, T 7 mm. Context 5002, Trench 5.

SF 026 Triple-toothed, socketed iron tool (Fig. 4.8). The round open socket leads into a flat, expanding head with three pointed teeth (one is broken). The middle tooth is longer (5.5 mm) than the tooth on the edge (4.5 mm). L 57.5 mm; head W 19 mm, T 3 mm; socket 15 × 10 mm. Context 5007, Trench 5.

SF 036 Square-sectioned iron rod fragment (Fig. 4.8). Tapers to one end which is twisted and broken. The other end is blunt. The twisted end suggests this could be blacksmithing debris, the smith having twisted the rod whilst the metal was hot and soft to separate it. L 28 mm, T 2–3 mm. Context 4002, Trench 4.



Fig. 4.12. Lead bar from Trusty's Hill

SF 113 Thistle-headed iron pin (Fig. 4.8). Two bands of incised decoration encircle the swollen round-sectioned shank. The tip is missing. The ornamental incised bands comprise diagonal lines bounded by a horizontal line on each side. The X-ray shows there were traces of copper alloy inlay within the incised decoration (Fig. 4.10). There is also a hint of milled bands around the head, though these are mostly obscured by corrosion (Fig. 4.11). L 49 mm; shank D 3–5 mm; head L 9 mm, D 9 mm. Context 4007, Trench 4.

SF 115 Vessel handle (Fig. 4.8). Square-sectioned iron bar bent to form a loop at one end; broken at other. This looped terminal is probably a vessel handle rather than a fitting due to the curve of the bar. L 35 mm; rod T 6 mm; loop internal diameter 11.5 mm. Context 4011, Trench 4.

The lead

Gemma Cruickshanks and Fraser Hunter

A single lead object (SF 186; Fig. 4.12) was recovered from the dark soil deposit (4011) on the east side of the summit of Trusty's Hill. Some hammer-marks are visible on the surface from shaping it. This was probably an ingot of raw material for use in lead-working activity. Lead can be used for a variety of purposes, such as weights, repairs or solder and was commonly used in the early medieval period such as at Dunadd in Argyll, and the Mote of Mark and Whithorn in Dumfries and Galloway (Lane & Campbell 2000, 159; Laing & Longley 2006, 116; Nicholson 1997b, 389).

SF 186 Wavy, rectangular-sectioned lead bar (Fig. 4.8 and 4.12). One end is broken; the other is squared. L 59 mm, W 5 mm, T 3 mm. Context 4011, Trench 4.

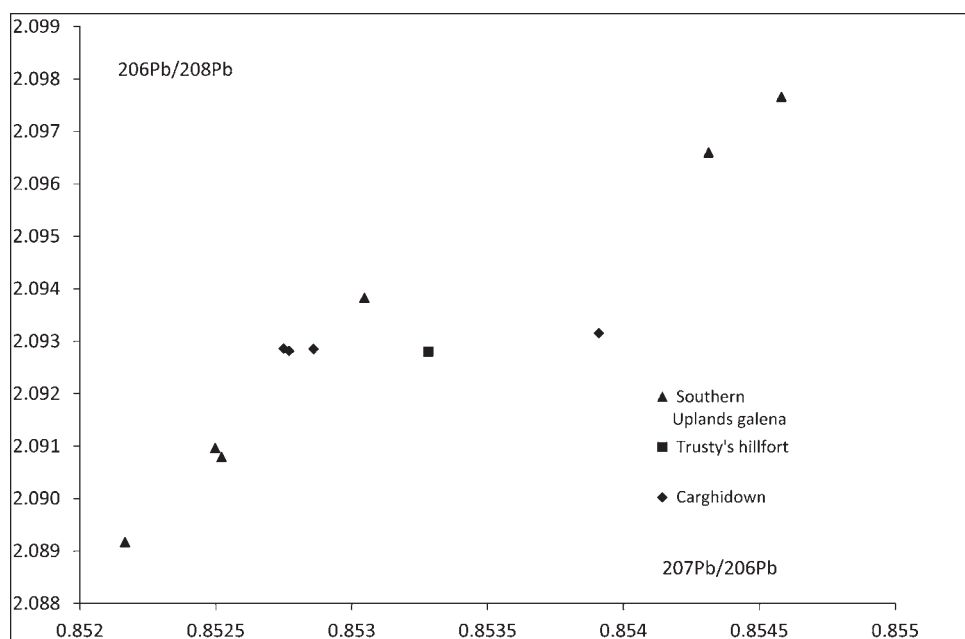


Fig. 4.13. $^{207}\text{Pb}/^{206}\text{Pb}$ vs $^{206}\text{Pb}/^{208}\text{Pb}$ plot of the data obtained for the control samples (lead beads from Carghidown Iron Age promontory fort in Galloway and Pb isotope composition galena from the southern uplands) and the Trusty Hill lead bar

Lead isotope analysis of lead bar

Vanessa Pashley and Jane Evans

The aim of the lead isotope analysis of the lead bar was to assess, from the lead composition, whether the lead used in its production bore similarity to other south-western Scottish provenanced lead. An area of the sample of the lead bar (SF 186) was cleaned by applying a dilute solution (2%) of Teflon distilled HNO_3 . This was left to soak for ~ 5 minutes. The acid was then pipetted off and replaced with clean acid. This cleaning step was repeated a total of five times (*i.e.* until all surface contamination had been removed and a 'clean' area of the artefact exposed). A further drop of 2% HNO_3 was applied to this clean area, and left to stand for ~ 5 minutes, after which time it was pipetted off and placed into a clean Savillex vial where it was evaporated to dryness and converted to bromide form by the addition of 1 ml 0.5M HBr. This too was evaporated to dryness and a further 1 ml HBr added prior to Pb separation anion resin AG1 X8.

Pb isotope analysis of the sample and standards was conducted using a Nu Instruments Nu Plasma HR MC-ICP-MS (multi-collector inductively coupled plasma mass spectrometer). Prior to analysis, the sample was filtered through a Millex-LG, 0.2 μm , PTFE syringe filter (Millipore) and then diluted with an appropriate amount of 2% HNO_3 (*i.e.* to generate an ion beam intensity less than the Faraday collector saturation point of 10V). Finally, the sample was spiked with a Tl solution (added to allow for the correction of instrument induced mass bias) and introduced into the instrument via an ESI 50 $\mu\text{l}/\text{min}$ PFA micro-concentric nebuliser, attached to

a desolvating unit (Nu Instruments DSN). Five ratios were simultaneously measured ($^{206}\text{Pb}/^{204}\text{Pb}$, $^{207}\text{Pb}/^{204}\text{Pb}$, $^{208}\text{Pb}/^{204}\text{Pb}$, $^{207}\text{Pb}/^{206}\text{Pb}$ and $^{208}\text{Pb}/^{206}\text{Pb}$). Each acquisition consisted of 75 sets of ratios, collected at 5-second integrations.

The precision and accuracy of the method was assessed through the analysis of an NBS 981 Pb standard solution (also spiked with Tl) run before and after the sample. The average values obtained for each of the measured NBS 981 ratios were then compared to the known values for this standard (Thirwell 2002). The sample data was subsequently normalised, according to the relative daily deviation of the measured standard value from the true. Normalisation to an international standard in this way effectively cancels out the effects of slight daily variations in instrumental accuracy and allows the direct comparison of the data obtained during different analytical sessions. The analytical errors reported for the sample ratios are also propagated relative to the respective reproducibility of this standard, to take into account the errors associated with the normalisation process. The normalised and error propagated sample data is presented in Table 4.1.

The lead artefact (SF 186) from Trusty's Hill plots within the field of the lead beads recovered from stratified deposits from the Iron Age Promontory Fort at Carghidown in Galloway and close to the Pb isotope composition galena from the southern Uplands (Fig. 4.13; Parnell & Swainbank 1984). Seen in comparison with the Pb isotope plots from two fragments of Iron Age/early medieval lead slag from Cass ny Hawin (IO MMM Accession Number 1960-

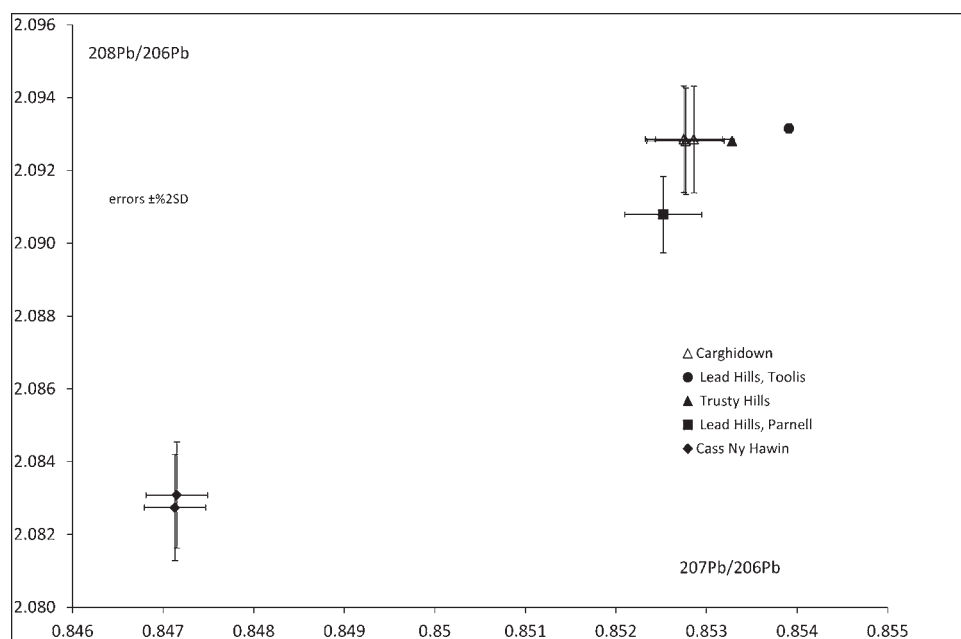


Fig. 4.14. $^{207}\text{Pb}/^{206}\text{Pb}$ vs $^{208}\text{Pb}/^{206}\text{Pb}$ plot of the data obtained for lead with south-west Scottish provenance (Trusty's Hill lead bar, Carghidown lead beads and Pb isotope composition galena from the southern uplands) in comparison with data obtained from lead slag from Cass ny Hawin on the Isle of Man, plotted as the average \pm 2σ error for each sample

0028) on the Isle of Man, the results demonstrate the likelihood of a southern uplands origin for the lead used in the Trusty's Hill lead bar (Fig. 4.14).

Metalworking

Non-ferrous metalworking debris

Ewan Campbell

Alongside the mould and crucible fragments there was a variety of other debris associated with high temperature processes recovered from Trenches 4 and 5 on the east and west sides of the summit of Trusty's Hill. Much of this material was probably from non-ferrous metalworking, but some could be from other domestic processes such as ovens, and some from the vitrified rampart. XRF analysis showed traces of copper on undiagnostic vitrified material (SF 200) from backfill deposit (4002), so is likely to have been the product of non-ferrous metalworking, but this is the only piece which can be fairly certainly attributed to fine metalworking (see Cruickshanks & Hunter below). However, a number of other pieces are probably also associated with non-ferrous metalworking, such as a fragment of a tuyère (SF 240), a clay nozzle protecting a bellows or blowpipe. There were also two fragments of furnace lining (SF 111 & 131), which like the tuyère fragment were recovered from the dark soil deposit (4007) at the east side of the summit, and were closely associated with the

mould and most of the crucible fragments, and so probably derived from a metalworking furnace in this area. This is also the area which has produced the largest pieces of fuel ash slag, vitrified material which is undiagnostic, but by association with the other material from the dark soil deposit (4007) can be said to probably derive from non-ferrous metalworking processes most likely on the eastern side of the summit.

- SF 020 Stone with vitrified surface. Context 5003, Trench 5.
- SF 029 Vitrified stone. Context 5017, Trench 5.
- SF 102 Fuel ash slag incorporating bone fragment. Weight 8 g. Context 4010, Trench 4.
- SF 107 Fuel ash slag. Weight 7 g. Context 4007, Trench 4.
- SF 111 Furnace lining, internal vitrification. Weight 4g. Context 4007, Trench 4.
- SF 128b Fuel ash slag. Weight 47 g. Context 4007, Trench 4.
- SF 131 Furnace lining, internal vitrification. Weight 1 g. Context 4007, Trench 4.
- SF 137b Fuel ash slag. Weight 3 g. Context 4007, Trench 4.
- SF 148 Fuel ash slag. Context 4010, Trench 4.
- SF 160b Fuel ash slag. Weight 17 g. Context 4007, Trench 4.
- SF 164 Stone with vitrification over breaks. Context 4007, Trench 4.
- SF 171 Fuel ash slag. Weight 13 g. Context 4016, Trench 4.
- SF 179b Fuel ash slag. Weight 2 g. Context 4011, Trench 4.

Table 4.2 Summary of vitrified material assemblage

Vitrified material type		Trench		Total (g)
		4	5	
Ironworking	Smelting slag	292.3	1.5	293.8
	Smithing hearth base	342.1	—	342.1
	Hammerscale	2.6	0.7	3.3
	Undiagnostic iron slag	271.8	—	271.8
Undiagnostic	Magnetic residue	5.7	0.2	5.9
	Non-magnetic residue	0.6	1.5	2.1
	Fuel ash slag	13	—	13
Total (g)		928.1	3.9	932

- SF 185 Stone with vitrification. Context 4007, Trench 4.
- SF 191 Fired clay lump. Context 5014, Trench 5.
- SF 200 Undiagnostic vitrified material. Weight 3 g. Context 4002, Trench 4.
- SF 227 Fuel ash slag incorporating stones. Weight 17 g. Context 4004, Trench 4.
- SF 228 Vitrified stone. Context 5012, Trench 5.
- SF 232 Fuel ash slag. Weight 7 g. Context 4007, Trench 4.
- SF 234 Fuel ash slag. Weight 16 g. Context 4007, Trench 4.
- SF 240 Tuyère fragment, heavily vitrified. Estimated *diam.* 10 cm. Weight 11 g. Context 4007, Trench 4.
- SF 274 Fuel ash slag. Context 5017, Trench 5.

Ironworking debris

Gemma Cruickshanks

A small assemblage of vitrified material was recovered during excavations at Trusty's Hill, weighing 932 g (summarised in Table 4.2). A range of high-temperature processes can produce vitrified material, from metalworking to domestic hearths. This assemblage was dominated by ironworking debris with a smaller amount of undiagnostic vitrified material, which may have been produced during a range of processes.

The early ironworking process can be split into two basic stages: smelting and blacksmithing. Smelting involves heating ore in a furnace to produce a bloom of iron, while the blacksmith heats and hammers the iron into an artefact. There are certain types of slag which are diagnostic of each stage, based on characteristics such as shape, density and texture. The assemblage was visually examined for diagnostic features and catalogued using common terminology (*e.g.* Crew & Rehren 2002; McDonnell 2007; Paynter 2002).

A single fragment of smelting slag (SF 160), weighing 0.3 kg, was recovered from the dark soil layer (4007) on the east side of the summit. It is

Table 4.3 Summary of hammerscale distribution

Trench	Context	Context summary	Weight (g)
4	4002	Backfill	0.2
	4007	Dark soil	1.4
	4009	Backfill	0.1
	4011	Dark soil	0.6
	4013	Backfill	0.1
	4019	Natural subsoil	0.1
5	5005	Rampart core	0.1
	5007	Rampart collapse	0.1
	5011	Collapsed rampart face	0.1
	5014	Dark soil	0.1
	5017	Construction layer	0.3
	5018	Rampart core	0.1
Total			3.3

characteristically large in size with frequent voids and charcoal impressions. Its amorphous shape suggests it was raked out of the furnace whilst still hot and soft, rather than being left to accumulate in the base.

One smithing hearth base (SF 161) was also recovered from a dark soil deposit (4011) on the east side of the summit. Smithing hearth bases are plano-convex accumulations of iron smithing slag which form in the hearth from small particles of slag dislodged as the iron is moved in and out of the hearth. This plano-convex base is unusual in that it comprises two small smithing hearth bases fused side-by-side, forming an '8' shape; this represents two episodes of blacksmithing without clearing the slag from the hearth.

Small magnetic flakes of hammerscale become dislodged from the iron's surface during hammering and as such are diagnostic of blacksmithing. When found in large quantities, it is a good indicator of in situ blacksmithing but small quantities can often become dispersed around the site. Trusty's Hill produced very small quantities of hammerscale (SF 204, 205, 207–9, 211–16, 218, 224, 225, 233 & 241) from 12 separate contexts (summarised in Table 4.3) from both the eastern and western sides of the summit, with no obvious concentration indicating the focus of activity.

As is normal for ironworking assemblages, many of the pieces are small and fragmentary iron slag and may have derived from either smelting or smithing. 271.8g of undiagnostic iron slag (SF 096, 107a, 108a, 128a, 137a, 143, 161, 176, 178, 179a & 235) was collected from three contexts (4007, 4010 & 4011) in Trench 4 on the eastern side of the summit.

In addition to material diagnostic of ironworking, a small amount of undiagnostic material may have formed during a range of pyrotechnic activities. 13 g of fuel ash slag (SF 221 & 226) was recovered from the rampart core (5018) and the construction

deposit (5017) on the west side of the summit. Fuel ash slag forms during the high-temperature reaction between fuel, such as charcoal, and silicates (*e.g.* from sand, clay or soil). As such, it can form during many processes, from a regular domestic hearth to ferrous or non-ferrous metalworking, both of which were present at Trusty's Hill. A small quantity (5.9 g) of tiny particles of magnetic vitrified residues (SF 206, 210, 217, 219, 220, 229, 230, 233, 236–8 & 276) was recovered during sample processing of a range of backfill (4002, 4009, 4013 & 4014), dark soil (4011), occupation (4020) and construction (4016) deposits from the east side of the summit, as well as backfill (5003) and rampart core (5002 & 5005) deposits from the west side. A small quantity (2.1 g) of tiny particles of non-magnetic vitrified residues (SF 222, 223 & 239) was also collected during soil sample processing of backfill deposit (4013) from the east side of the summit and a lens of the rampart core (5005) and bedrock interface (5008) from the west side, and are similarly undiagnostic.

Though the vitrified material assemblage from Trusty's Hill is small, it provides a valuable glimpse of craft activity at the site during the early medieval period. It is difficult to establish the scale or focus of the ironworking activity from the few scattered fragments but the dispersed hammerscale and superimposed smithing hearth base suggest repeated blacksmithing took place.

Ironworking and non-ferrous metalworking are commonly found on early medieval sites, for example at Dunadd in Argyll (Lane & Campbell 2000, 218), Mote of Mark in Dumfries and Galloway (Laing & Longley 2006, 36) and Portmahomack in Ross and Cromarty (Carver 2008, 133 & 139). Iron smelting evidence tends to be rarer than blacksmithing during this period though it is present at Inchmarnock in Argyll and Bute (Lowe 2008, 202) and Whithorn in Dumfries and Galloway (Hill 1997, 27, 37 & 67). The frequency of metalworking evidence and other crafts on these sites highlights the craftworker's integral role in early medieval communities and the evidence from Trusty's Hill is a valuable addition to this picture.

X-ray fluorescence analysis of metalworking ceramics and copper alloy mount

Gemma Cruickshanks and Fraser Hunter

The copper-alloy Anglo-Saxon mount (SF 023), lead bar (SF 186) and 36 fragments of ceramic metalworking debris recovered during the excavations at Trusty's Hill were analysed by surface X-ray fluorescence.

Non-destructive surface X-ray Fluorescence (XRF) was employed. The XRF system used was an Oxford Instruments ED 2000 with Oxford Instruments software ED 2000SW version 1.31. The analysed area

was irradiated with a primary X-ray beam produced by a Rhodium target X-ray tube. The primary beam was collimated to give an analysed area of about 4 × 2 mm. Secondary X-rays were detected with a silicon (lithium) solid state detector. The detection limit varies depending on the elements, matrix and analytical conditions, but is typically in the range of 0.05%–0.2%. As the analytical technique has a limited penetration depth, the reported compositions may not be representative of the bulk of the alloy if there is a chemically distinct surface layer. Spectra were collected with an operating voltage of 46 kV and a current of up to 1000 µA (set automatically for a 45% dead time) without a primary beam filter to ensure detection of all elements of atomic number 19 or above. The system was checked with the GM8B and C.50.20 copper alloy standards.

The flattest area of the object's surface was analysed, to allow better focusing of the X-ray beam. The crucibles were analysed on areas with visible residues in the first instance; on those without such residues the inside surface was analysed. Small fragments (<10 mm) had one analysis, larger fragments two or more. Variations in the thermodynamic properties of different metals mean the results give only a broad indication of casting alloys used (Barnes no date; Dungworth 2000). For the metal objects, the results (Table 4.4) give a qualitative assessment of their composition; no cleaning of the surface was undertaken.

XRF analysis of the Anglo-Saxon mount (SF 023) from backfill deposit (4002) revealed that this was a copper-zinc-lead alloy (a leaded brass) which had been gilded and silvered. Interestingly, no visible trace of gilding or silvering survives on the object, although such surface treatments are common on these mounts (Blackwell *infra*). While both gold and silver are present on the front, only a trace of silver was found on the rear; this may represent an accidental overflow from surface treatments on the front.

The lead bar (SF 186) from dark soil deposit (4011) was revealed by XRF to be lead rather than pewter although trace levels of copper and tin indicate some alloying or accidental mixture.

XRF analysis of the crucibles showed a range of metallic elements including copper, tin, lead, zinc and silver. As crucibles may have been used more than once, with different metals each time, the results probably represent an amalgam of metals rather than a single alloy. Barnes (no date) and Dungworth (2000) caution about the dangers of interpreting such results, but it is notable that a high proportion (four) of the crucibles show a combination of copper, tin and lead, suggesting use of leaded bronze. Zinc is surprisingly sparse given its volatility; it is present in only four crucibles, generally at low levels, suggesting it was not a major alloy component. Notably high levels of

Table 4.4 XRF analysis results

<i>Find</i>	<i>Context</i>	<i>Type</i>	<i>Cu</i>	<i>Sn</i>	<i>Pb</i>	<i>Zn</i>	<i>Au</i>	<i>Ag</i>	<i>Other metallic element</i>
020	5003	Crucible	x			x			
023	4002	Anglo-Saxon mount	xx	x	x	x	x	x	
037	4002	Crucible	x	x	xx				
087	4007	Crucible	x	x	xx	x			
097a	5018	Crucible	x	x	xx				
097b	5018	Crucible	xx	x	xx				
102	4010	Vitrified material							
106	4007	Crucible	x	x	x	x		x	Ni
107b	4007	Vitrified material							
128b	4007	Vitrified material (largest fragment analysed)							
131	4007	Vitrified material							
137b	4007	Failed crucible?							
148	4010	Vitrified material							
160b	4007	Vitrified material							
162	4007	Crucible	x	x	xx				
164	4007	Crucible	x						
169	4011	Crucible	x		x	xx			
171	4016	Vitrified material							
174	4007	Mould	x			x			
175	4007	Heating tray	x			x	x	x	
179b	4011	Vitrified material							
185	4007	Crucible							
186	4011	Lead strip	x	x	xxx				
192	4007	Pin mould	x		x	x			
200	4002	Vitrified material	x						
201	4010	Crucible							
202	5018	Crucible	x						
203	5017	Crucible	x		xx				
227	4004	Vitrified material (largest fragment analysed)							
228	5012	Vitrified material	x						
231	5017	Failed crucible?							
234	4007	Failed crucible?							
240	4007	Vitrified material							
274	5017	Failed crucible?							
278	4007	Crucible stand?	x						
279	4007	Mould	x		x	x			

(x = small/ moderate amount; xx = large amount; xxx = very large amount)

lead are present on six of the crucible fragments (SF 037, 087, 097a, 097b, 162 & 203) from backfill (4002) and dark soil deposit (4007) on the east side of the summit and rampart core (5018) and construction deposit (5017) on the west side of the summit, but lead is almost as volatile as zinc (Dungworth 2000; Kearns *et al.* 2010) and these are likely to derive from casting of leaded alloys, probably leaded bronzes.

Silver was identified (along with copper, tin, lead and zinc) on one crucible fragment (SF 106) from dark soil deposit (4007) on the eastern side of the summit. Both gold and silver were identified on the heating-tray fragment (SF 175) again from dark soil deposit (4007) on the eastern side of the summit. Of the other vitrified ceramics, the crucible stand (SF 278), also from dark soil deposit (4007), showed copper.

All three mould fragments (SF 174, 192 & 279) showed copper and zinc while two of the mould fragments (SF 192 & 279) also showed lead, indicating all three had been used to cast copper-alloy objects. The results show a poor correlation with the data from crucibles; the latter are more reliable as the thermodynamic behaviour of metals in the reducing conditions of the mould make lead and zinc greatly over-represented in relation to their presence in the alloys (Dungworth 2000).

Sixteen fragments of undiagnostic vitrified ceramics were analysed with the aim of establishing whether they were associated with metalworking, and if so, what type. Only two fragments (SF 200 & 228) produced metal traces, both copper. All the other fragments only produced the range of elements

Table 4.5 General lithics list

	Trench 2	Trench 4	Trench 5	Total
Chips			1 (q)	1
Flakes		3		3
Indeterminate pieces	1 (q)	1		2
Single-platform cores			1	1
Fire-flints & poss./prob fire-flints		6	3	9
Vitrified flint pebble			1	1
TOTAL	1	10	6	17

(q = quartz; the remainder are flint)

Lithics

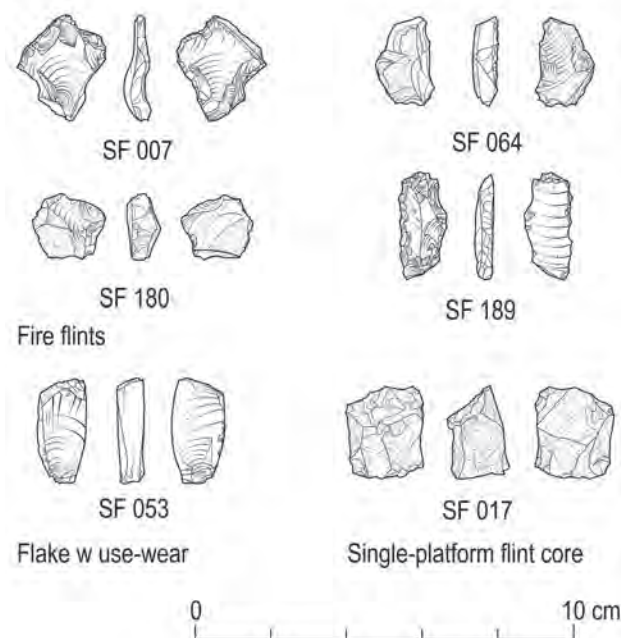


Fig. 4.15. Lithics from Trusty's Hill

naturally present in clay. This does not necessarily mean they were not associated with metalworking, only that they did not come into contact with the metal.

Lithics

Torben Bjarke Ballin

A small lithic assemblage (16 worked pieces and one vitrified flint pebble) were recovered from the 2012 excavation of Trusty's Hill. The assemblage includes 14 worked pieces of flint and two pieces of quartz, as well as one vitrified flint pebble (Table

4.5). One flint seems to be a small core, whereas nine are fire-flints. The remaining six lithics are debitage. The debitage includes one chip, three flakes and two indeterminate pieces. Three flints (SF 039, 095 & 189) are burnt (fire-crazed and discoloured), whereas two (SF 017 & 242b) are vitrified (*i.e.* showing superficial melting/glazing).

The flint is highly varied, and it includes fine-, medium- and coarse-grained material, as well as several different colours (*e.g.* various browns, light-grey and cream). Some of the flint types are pure, whereas others contain chalk balls or they may be highly fossiliferous. Most importantly, all the recovered cortical flint artefacts have smooth abraded surfaces, suggesting that they were procured from pebble sources, and they were probably all obtained from local streams and beaches. It has not been possible to provenance the quartz but it could have been procured in pebble form from local streams and beaches.

Only one of the flakes (SF 053) is technologically definable. This piece is a hard-hammer flake and the presence of a pronounced bulb of percussion on either face defines this blank as a Janus flake (Inizan *et al.* 1992, 57), which was removed from the ventral face of a larger flake (Fig. 4.15). Use-wear along both lateral edges indicates that this may have been used as an expedient spoke-shave for the processing of relatively hard materials (wood, bone, antler). Indeterminate flake (SF 188) has similar use-wear. The blanks of the fire-flints and the possible/probable fire-flints are mostly hard-hammer flakes, although the technological attributes of some pieces indicate that anvil (bipolar) technique may also have been used.

The single-platform core (SF 017) is a fairly regular piece with an untrimmed, faceted platform (Fig. 4.15). This piece may be a residual prehistoric object.

Nine pieces have been defined as fire-flints (SF 007, 064, 140, 187 & 189) or possible/probable fire-flints (SF 013, 095, 180 & 242a). The most basic part of the fire-flint terminology is the name of the category, the purpose of which is to allow distinction between flints involved in early prehistoric (*e.g.* Stapert & Johansen 1999) and late prehistoric/historic fire-making (*e.g.* Koch 1990). Two different techniques were applied to produce fire, with early prehistoric fire-making involving a flint and a piece of pyrite, whereas late prehistoric/historic fire-making involved a flint and a mostly bullhorn-shaped steel implement. It is suggested to limit the use of the term 'strike-a-light' to the implements doing the actual striking (subject), and not the material which is being struck (object). This means that, in early prehistoric fire-making, the flint is the strike-a-light (as it strikes the pyrite), whereas, in late prehistoric/historic fire-making, it is not (as it is being struck by the steel strike-a-light). Struck late prehistoric/historic lithics should therefore be referred to as 'fire-flints' (Ballin

2005, 18). The fact that the early prehistoric and late prehistoric/historic fire-making flints are subjects and objects, respectively, results in notably different wear-patterns, with the former developing smooth abraded points, whereas the latter develop chipped and crushed edges.

The pieces from Trusty's Hill generally have chipped/crushed edges and, occasionally, battered dorsal ridges. In most cases, these flints were used for fire-making without any secondary modification (e.g. SF 007; Fig. 4.15). However, one fire-flint (SF 187) has one finely blunted edge, the purpose of which may have been to protect the user's fingers during use. The edges of fire-flints (SF 064 and 188) may have been retouched prior to being struck, simply to strengthen the edges (Fig. 4.15). However, this is not certain, and the apparent coarse lateral retouch may have been formed by the pieces being struck repeatedly by a steel strike-a-light. Another possible fire-flint (SF 180) has a slightly convex denticulated working-edge, which results in the piece resembling a crude scraper (Fig. 4.15), but it is probably more likely that this edge was formed by being struck by a steel strike-a-light. Repeated use of a stone as a fire-flint frequently results in the formation of lateral concavities. The best example of this is a four-sided flake fragment (SF 007), which has been battered along all four edges, and all edges display notable concavities (Fig. 4.15). One lateral edge of an elongated fire-flint (SF 189) is slightly denticulated, whereas the other lateral edge displays two adjacent shallow concavities (Fig. 4.15).

Fire-flints are notoriously difficult to date by typo-technological analogy, but the fact that several pieces are vitrified (SF 017 and 242a), whereas others are heavily burnt (SF 039, 095 and 189) suggests that they may have been made and used prior to the destruction of the fort by fire, the event that transformed the site into a *vitrified* fort. The use of steel strike-a-lights for fire-making (rather than making fire by striking pyrite with a flint) indicates a date after the Bronze Age/Iron Age transition. This suggests that the flints recovered from Trusty's Hill are not residual Mesolithic or Neolithic pieces, but that they are contemporary either with the earliest Iron Age occupation of the site, or with the site's subsequent early medieval settlement.

As shown in Table 4.5, one indeterminate piece was recovered from the backfill (2005) of Thomas' excavation of the rock-cut basin in Trench 2, ten pieces predominantly from dark soil deposits (4007 & 4011) from Trench 4 on the eastern side of the summit, and six from the backfill (5003) and the topmost lens of the vitrified rampart (5002) from Trench 5 on the western side of the summit. All the fire-flints were recovered from the eastern and western sides of the summit; in terms of interpreting the specific use of

the fire-flints, their association with metalworking debris, particularly in Trench 4, may be important.

SF 007 Fire-flint on secondary hard-hammer flake (24 × 23 × 7 mm); fine-grained dark-brown flint (Fig. 4.15). This piece is without doubt the most obvious fire-flint from Trusty's Hill: the piece is roughly square, and it has been heavily battered along all four sides, creating notable concavities, and detaching sizeable chips from either face. Context 5002, Trench 5.

SF 013 Proximal fragment of secondary bipolar flake (16 × 16 × 8 mm); fine- to medium-grained, light-brown to cream flint. Coarse use-wear along the left lateral edge suggests use either as a spoke-shave or a fire-flint. Context 5003, Trench 5.

SF 017 Fragmented tertiary single-platform core (25 × 21 × 15 mm); medium-grained, vitrified (discoloured white) flint (Fig. 4.15). The core's platform is untrimmed and faceted; the core's apex and one lateral side have disintegrated. Context 5003, Trench 5.

SF019 Burnt pebble (19 × 15 × 13 mm); discoloured flint. Four small detached 'pot-lid' chips show how the exposure to fire coloured the exterior of the piece dark, whereas the interior has turned white. The shiny cortex of the piece defines this piece as technically vitrified. Unworked. Context 5003, Trench 5.

SF 039 Tertiary indeterminate piece (17 × 16 × 13 mm); fine-grained, heavily burnt (discoloured white) flint. Context 4002, Trench 4.

SF 051 Tertiary indeterminate piece (26 × 24 × 14 mm); fine-grained, white milky quartz. Context 2005, Trench 2.

SF 053 Secondary hard-hammer Janus-flake (28 × 15 × 7 mm); fine-grained, light-brown flint (Fig. 4.15). As a Janus-flake, this piece was struck from a thick parent flake, for which reason it has a notable bulb-of-percussion on either face. It has notable use-wear along both lateral sides, probably from use as a spoke-shave on hard material(s). Context 4007, Trench 4.

SF 064 Fire-flint on primary indeterminate flake (23 × 14 × 7 mm); medium-grained, light-brown to cream flint (Fig. 4.15). The two lateral sides appear retouched, but this may mainly be battering from having been struck by a steel strike-a-light. The modified/worn lateral sides are straight to slightly concave, and sizeable chips were removed along both sides, ventral and dorsal faces, by use. Context 4007, Trench 4.

SF 092 Unspecified fragment of tertiary indeterminate flake 20 × 17 × 7 mm); medium-grained, heavily discoloured (white). Context 4007, Trench 4.

SF 095 Possible fire-flint on secondary indeterminate piece (17 × 15 × 11 mm); medium-grained, heavily burnt (discoloured white) flint. The ripples of some flake scars indicate that the piece may have been produced (at least partially) by the application of bipolar technique. Several edges are heavily battered, possibly from having been struck by a steel strike-a-light. Context 4007, Trench 4.

SF 140 Medial fragment of fire-flint on secondary

Table 4.6 Worked stone artefact types

Find No.	Trench	Context	No. pieces	Description	Context description
A 001	4	4001	1	Rubbing stone	Topsoil
018	5	5003	1	Rubbing stone	Backfill
029	5	5013	1	Anvil	Rampart collapse
035	5	5014	1	Spindle whorl	Dark soil
043	2	2002	2	Rubbing stone	Backfill
183	4	4011	1	Unworked	Dark soil layer
190	2	2002	1	Unworked	Backfill
B 024	4	4002	1	Rounded pebble - slingstone	Backfill
059	4	4003	26	Rounded pebbles - slingstones	Backfilled rampart collapse
068	2	2005	3	Rounded pebbles - slingstones	Backfill
085	4	4003	21	Rounded pebbles - slingstones	Backfilled rampart collapse
110	4	4007	8	Rounded pebbles - slingstones	Dark soil
112	4	4007	2	Rounded pebbles - slingstones	Dark soil
123	4	4007	12	Rounded pebbles - slingstones	Dark soil
149	4	4011	5	Rounded pebbles - slingstones	Dark soil
155	2	2005	5	Rounded pebbles - slingstones	Backfill
156	2	2007	3	Rounded pebbles - slingstones	Primary fill of rock cut basin
<i>Totals</i>			97		

indeterminate flake ($8 \times 15 \times 5$ mm); fine-grained, light-brown flint. Up to eight millimetres survive of each lateral side. Those sides show signs of heavy battering, probably from having been struck by a steel strike-a-light. Context 4007, Trench 4.

SF 180 Proximal fragment of denticulated scraper or fire-flint on tertiary indeterminate flake ($18 \times 18 \times 8$ mm); medium- to coarse-grained, cream flint (Fig. 4.15). The proximal end has acquired a roughly convex, denticulated delineation by having been struck repeatedly. However, it is uncertain whether this edge represents an uneven scraper-edge, or whether the edge was shaped by being struck by a steel strike-a-light (at the points of the individual dents). The fact that various dorsal ridges also appear battered, supports the fire-flint interpretation. Context 4011, Trench 4.

SF 187 Distal fragment of fire-flint on secondary flake w edge-retouch ($12 \times 12 \times 3$ mm); fine- to medium-grained, light-brown flint. The right lateral side of the piece has been blunted by fine retouch. The distal end is concave and shows signs of having been battered by a steel strike-a-light (a number of small chips have been detached ventrally as well as dorsally). Context 4007, Trench 4.

SF 188 Lateral/distal fragment of secondary indeterminate flake ($17 \times 16 \times 10$ mm); fine-grained, light-grey flint. The ridge between the surviving ventral face and the broken-off left lateral side displays use-wear from the processing of hard materials. This piece may also have been used as a spoke-shave. Context 4007, Trench 4.

SF 189 Medial fragment of fire-flint on tertiary ?bipolar flake ($28 \times 13 \times 5$ mm); fine-grained, dark-brown flint (Fig. 4.15); burnt, but not discoloured. Although the piece is missing both ends, the character of the ventral ripples indicates that the piece may have been produced by the application of bipolar technique. The two lateral sides appear retouched, but this may mainly be battering from having been struck by a steel strike-a-light. Context 4007, Trench 4.



Fig. 4.16. Selection of slingstones from eastern side of summit of Trusty's Hill

SF 242a Proximal fragment of tertiary hard-hammer flake, possibly fragment of fire-flint ($10 \times 13 \times 4$ mm); fine- to medium-grained, vitrified (discoloured white) flint. Surviving bits of the lateral sides show signs of having been battered. Context 5002, Trench 5.

SF 242b Chip (10 mm); fine-grained, white milky quartz. Context 5002, Trench 5.

Coarse stones and stone tools

Beverley Ballin Smith

The 2012 archaeological work at Trusty's Hill produced a small but interesting range of stone artefacts. In total there were 97 stone artefacts

recovered, the majority (89) of which were unworked pebbles, the remainder (8) comprised rubbing or burnishing tools, a spindle whorl, an anvil and other

unworked stones. The different tool and artefact types are shown in Table 4.6, which is divided into two parts. Part A is a list of worked or possibly worked stone and Part B comprises small, rounded unworked stones identified as slingstones.

Table 4.7 Geology of the slingstones

Number	Rock type
2	sandstone
16	quartz
68	granite

Table 4.8 Stone shape

Sub-angular	Elongated rounded	Sub-rounded	Flattened rounded	Irregular rounded
1	11	27	3	43

Table 4.9 Slingstone weights

Stone type	Total weight (g)	Average weight (g)
Granite (65)	4444.7	71.5
Quartz (15)	1302.5	87
Sandstone (1)	54.8	54.8
Individual average weight		74
Total weight	5802	

Slingstones

A total of 89 rounded stone pebbles, including five cobbles each over 200 g in weight, were retrieved from Trenches 2 and 4 during the 2012 excavation. The majority (78) of these rounded stones, were found located close together either in two caches, totalling 47 stones, in the backfilled interior rubble collapse (4003; SF 059 & 085; see Fig. 2.10) or distributed within dark soil deposits (4007 & 4011) on the eastern side of the summit, suggesting they had been deliberately collected and brought to the site for use. There is great variation in size and shape (Fig. 4.16).

Their geology is somewhat varied (see Table 4.7) indicating that the shape of the stone was perhaps more important than its type, although the majority are granite pebbles. The stones are likely to have been deliberately collected from a nearby water source such as the River Fleet, which is likely to have brought stones from other geological areas downstream, as the inclusion of sandstone and quartz implies.

The stones have shapes that suggest roundness was preferred, even though there are flattened or elongated examples as the variations in Table 4.8 show. No stone is spherical. There was some preference for shapes that were irregularly rounded (50 %) and sub-rounded (*c.* 32 %) but not all were. Examination of depositional contexts and shape

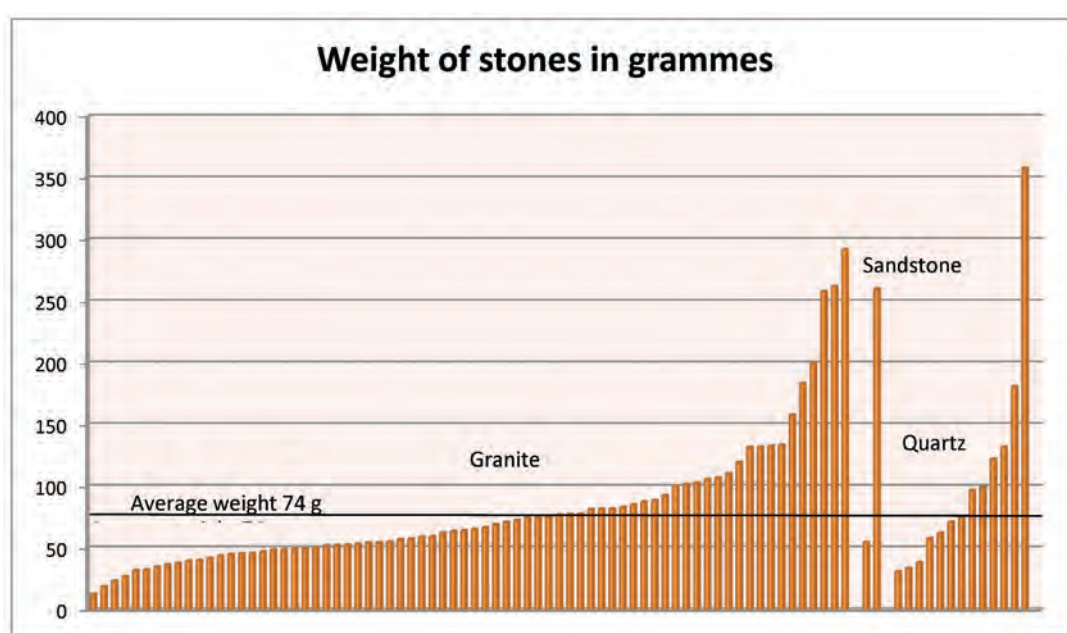


Fig. 4.17. Weight of slingstones in grams

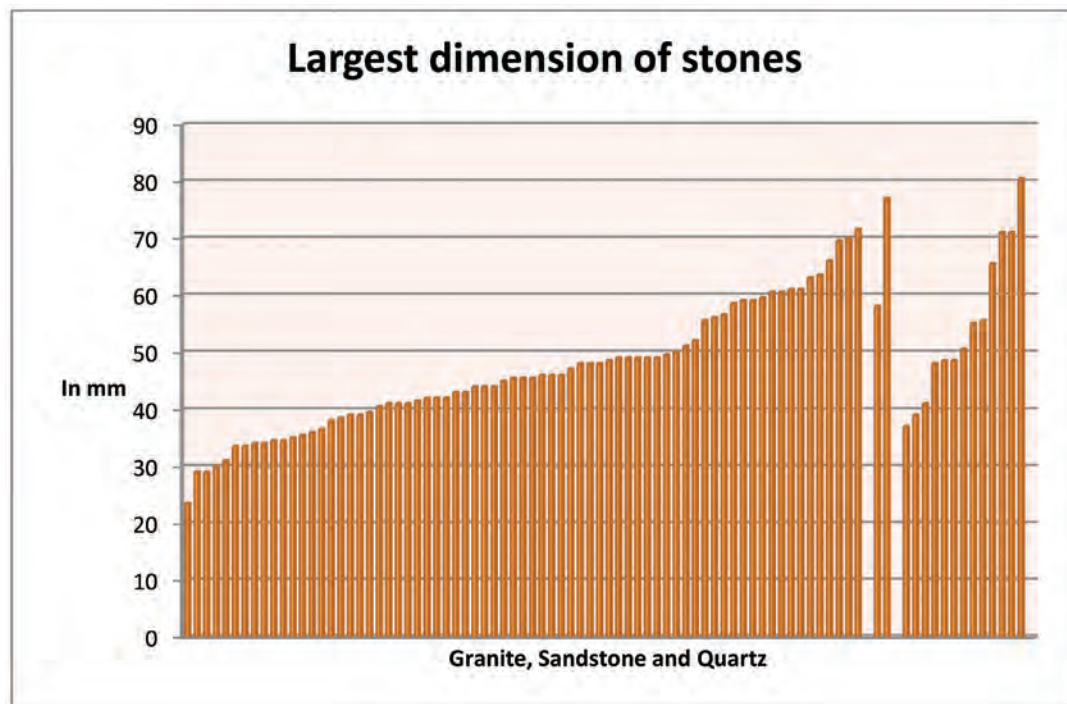


Fig. 4.18. Largest dimensions of slingstones

showed that there was no specific tendency for one shape over another. Most depositional contexts contained a mixture of stone shapes.

The weights of individual stones vary from 12.5 g to over 180 g (Table 4.9). Six stones or cobbles weighed over 200 g and are discounted from Table 4.9. The different rock types produced different average weights with sandstone being the lightest. The average weight of a stone was calculated to be 74 g. The slightly lighter weight granite stones were preferred over quartz, but that may have been a result of what resources were available.

The weight of each stone has been plotted and divided into stone types (Fig. 4.17). The average weight is shown as 74 g and the six stones weighing 200 g or more are cobbles. An attempt was made to see if the largest measured dimension of the stones would show any distinctive characteristic across the stone types (Fig. 4.18). It can be seen that the majority of stones lie within the 30 to 50 mm size range, with very few below 30 mm in length.

The stones were examined for evidence of working (chipping, hammering, abrasion, polish, *etc.*) but all were found to be in a natural and unmodified state. The most important aspect of these stones is the fact that the majority were found close to the interior side of the rampart on the eastern side of the summit, either distributed within dark soil layers (4007 & 4011), or in two concentrations within the backfilled interior rampart collapse (4003).

A flexible sling with a cradle and a small stone was probably one of the earliest weapons and one

that was easiest to make with a strip of leather that held a round stone or pebble (Richardson 2013). In the south of England, slings were identified as defensive weapons at Iron Age hillforts, such as Danebury and Maiden Castle where huge numbers of slingstones were found in pits close to the rampart gateways (Cunliffe 1991, 489); those from Danebury were as large and as heavy as those from Trusty's Hill (Richardson 2013). Cunliffe suggests slingstones and hillforts are closely associated, as the former was an effective weapon against an attacking enemy. In research into slingstones and slingshot, experiments with stones up to 160 g and lead balls up to 100 g in weight demonstrated that these stones could be effectively used with a sling (Richardson 2013). The shot used in this experiment lies towards the top end of the Trusty's Hill stone weight range, but nevertheless they could be cast over 100 m distance using a sling.

Nine stone balls identified from the Dunion hillfort in the Scottish Borders were interpreted as gaming pieces rather than slingstones but further information on their size and weight was not available (Rideout *et al.* 1992, 102). The evidence from broch sites where stone balls have been found, such as Howe in Orkney and Clickhimin in Shetland, for example, indicates that they lie at the smallest end of the Trusty's Hill examples (Fig. 4.18), and are often highly polished suggestive of gaming pieces or amulets (Ballin Smith 1994, 191). Their numbers are also very low.

Though the number of slingstones in the assemblage at Trusty's Hill is relatively low, it is analogous with

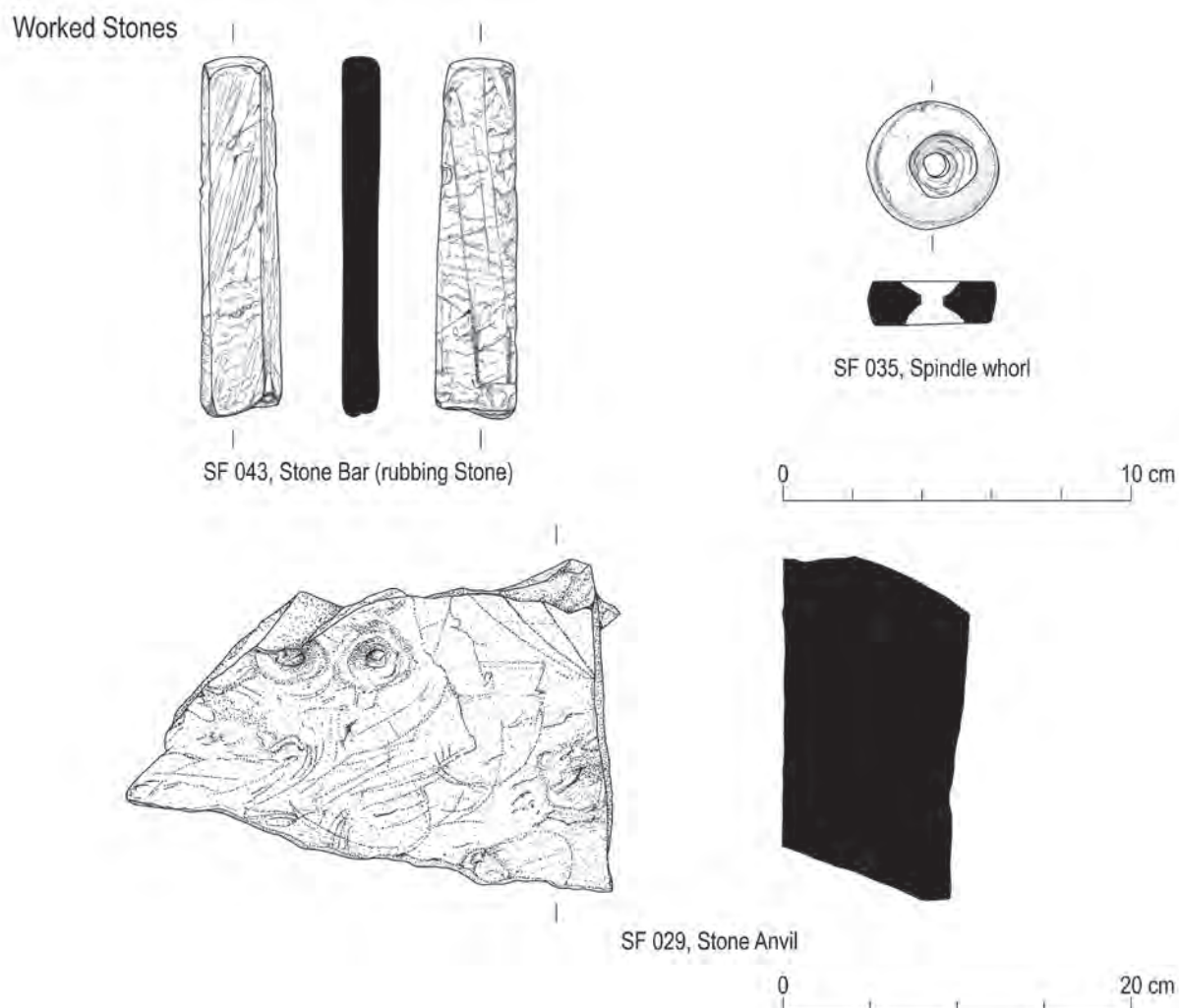


Fig. 4.19. Worked stones from Trusty's Hill

some of the larger Iron Age hillforts in southern England, where slingstones were gathered close to the rampart gates for defensive purposes. The slingstones from Trusty's Hill were predominantly found immediately behind or associated with the eastern ramparts, suggesting perhaps they were gathered and stored at this location near the gateway, ready for use with a sling.

Spindle whorl

A spindle whorl (SF 035; Fig. 4.19) was recovered from a dark soil layer (5014) in Trench 5 on the western side of the summit. The whorl is almost circular, 37 mm in diameter, with vertical sides 12 mm deep and weighs 21.7 g. It was made on soft blonde, fine-grained sandstone but had suffered surface spalling and nicks on its edges and sides. The piece was shaped with a knife as the evidence of the sides suggests. They are uneven and slightly faceted where they have been cut or trimmed. Both surfaces are flat and smooth and are pierced by a perforation. A knife was again used

to produce a wide (15.5–17.5 mm) aperture on both surfaces of the whorl, which narrows to the central perforation, 7 mm in diameter. The uneven surface aperture and serrated marks within it suggest that the knife had a narrow blade. The use of a knife for the manufacture of this whorl contrasts with that of prehistoric whorls, which were generally drilled and smoothed.

Williams described several spindle whorls from early ecclesiastical sites, mostly from churchyards but now in the Dumfries Museum (1966, 149–51). One example from Durisdeer is a fine-grained sandstone piece, but all are similar: in measurements (diameters vary between 38 mm and 52 mm) and weights (between 26 g and 50 g). Their thickness is between 1.1 mm and 1.5 mm, the diameter of their perforations varies between 0.9 mm and 1.4 mm, and several examples are splayed. Most whorls are decorated with generally coarse incised lines on one or both surfaces. Williams' shows their shapes were not entirely round, with examples 2, 3 and 4 exhibiting some straightness of their circumferences (1966, 150,

Table 4.10 Weights and measurements of rubbing stones

<i>Find</i>	<i>Context</i>	<i>Weight (g)</i>	<i>Length (mm)</i>	<i>Breadth (mm)</i>	<i>Width (mm)</i>	<i>Type</i>
001	4001	53.1	115	23.5	10.2	Rubbing stone
018	5003	21.6	80	18	10.5	Possible rubbing stone
043	2002	47.7	104	21.5	11	Rubbing stone/ burnisher
183	4011	83.1	74.5	35	22.5	Unworked
190	2002	17.7	74	12.5	15.5	Unworked?

fig 3). Example 5 is slightly larger than that found at Trusty's Hill but its crude manufacture is similar. The Trusty's Hill spindle whorl shares characteristics with these published whorls as all appear to have been knife-trimmed. Their dates are not discussed further by Williams but the Durisdeer spindle whorl was associated with a tenth century Northumbrian Cross fragment.

The crude manufacture of the whorl indicates that it was expediently and quickly produced. Apart from the examples mentioned above, another comparable spindle whorl of similar dimensions was found at the Mote of Mark (Laing & Longley 2006, 95, fig. 45, 1227). This whorl was decorated by a crude incised design on one face and was found within the backfill from the 1913 excavation of the site.

From current evidence, this type of spindle whorl is not uncommon in Dumfries and Galloway but the example from Trusty's Hill is well provenanced and from a radiocarbon dated context. The sixth/seventh century date, for the context from which the whorl was recovered, does not conflict with Williams' ideas of their association with early ecclesiastical sites, but a broader interpretation is needed to include occurrences from hillforts and other settlement types of the same period. Spindle whorls of this type were pieces of equipment that were likely in general use across a variety of settlement types.

Rubbing or burnishing stones

Five stones, comprising four bars and one elongated pebble-end, form a small collection of rubbing stones and similar objects recovered from the 2012 excavations (Table 4.10).

The majority of these pieces are largely unmodified bars, including one thin cobble (SF 190). If they were bar whetstones, they would be the right shape and the right type of stone, but they are not. Three of the five pieces are modified and some are only slightly so. SF 043 is the best example, identified as a rubbing stone or burnisher (Fig. 4.19). Its worn ends indicate that it had a specific use, probably rubbing or smoothing across a flat surface area, but the shaft of the bar was its unmodified handle.

Stones with smoothed ends have been found at other hillforts. One interesting sandstone example was found in modern disturbances over the rampart at Dunadd (Lane & Campbell 2000, 191, Illus 4.105, 63) where it was tentatively identified as a pestle/whetstone. Although squat in shape and with a rectangular section, both ends are polished, one end being dome-shaped while the other is flat. Another cylindrical sandstone piece was found at the Mote of Mark and was described as a whetstone and burnisher (Laing & Longley 2006, 93 & 95, fig. 45, 2229). Similar examples were found at Whithorn which were considered to have been used to polish enamel or gems, or burnish gold, silver or pattern welding (Chadburn *et al.* 1997, 458, fig. 10.119). The Trusty's Hill examples are fine-grained but it is suggested that SF 043 may have been used for working and smoothing leather or skin as the tool is relatively soft and the wear or polish on its ends is smooth.

SF 001 This piece is a thin bar of fine-grained siltstone. It is largely unmodified but does have patches of iron staining on its surfaces due to it lying in damp or wet conditions. It was probably selected to be used as a whetstone/polisher but its surfaces are unmodified. One end tapers to an oblique blunt point and the curved edge of it is faceted with wear on the flatter surface of the tool. This discrete area of polish indicates that the bar has been used as a rubbing tool. It was found in topsoil at the east side of the summit. Context 4001, Trench 4.

SF 018 This is a fragment of a split bar of fine-grained sandstone/siltstone found in the backfill of the trench at the west side of the summit. One surface is rough with sharp edges where the bar has split and one end is faceted. The end could be the result of slight wear by rubbing, otherwise the piece is unmodified. Context 5003, Trench 5.

SF 043 This bar is of fine-grained sandstone/siltstone (Fig. 4.19). It is largely unmodified except for one end which is smooth and rounded through its use as a rubbing tool. The wear has progressed slightly onto the two flat surfaces and both sides. There is in addition a small area which has been rubbed smooth on one corner of the other end. It was recovered from the backfill of the rock-cut basin at the entranceway. Context 2002, Trench 2.

SF 183 This is a fragment of an elongated but thin cobble, broken across its middle. It was found in a dark occupation



Fig. 4.20. Anvil stone from Trusty's Hill

layer (4011) on the east side of the summit. The cobble fragment is of fine-grained micaceous sandstone and is unworked. One edge has been chipped and resulting spalls were produced on adjacent surfaces. Context 4011, Trench 4.

SF 190 This pointed and tapering bar is the smallest of the five objects but is also formed from split blonde fine-grained sandstone/siltstone. Its sides and surfaces are rough and unmodified. However, there is some slight smoothing of the edges towards the tip of the piece, and the flat end is smooth and straight. The smoothed areas could be the result of either the natural rock surface or of taphonomic processes. There is no clear indication that this piece has been used as a tool. It was recovered from the backfill of the rock-cut basin at the entranceway. Context 2002, Trench 2.

Anvil

A large, hewn, wedge-shaped block of pink sandstone (SF 029) was found within the rampart collapse (5013) in Trench 5 on the west side of the summit (see Fig. 2.18). It weighs *c.* 8 kg and measures 275 × 197 × 106 mm. The upper face of the stone indicates that it has been a working platform, possibly used as an anvil. The most prominent features are three indentations (Figs 4.19 & 4.20). Two of these lie close together near one long edge. Both indentations have been partially formed by pecking, and possibly by hammering with a metal object, to a depth of 8–10 mm. The larger hollow measures 30 × 35 mm and is splayed. The other hollow is a similar shape but is also only partial, as one side became detached as it lay closest to the edge of the stone. A third pecked hollow (33 × 24 × 8 mm) is situated on the short edge of the block, indicating that the stone split here, as the hollow is only partially present.

The other long edge of the stone has signs of more extensive working. There is a small area of pecking,

towards the short side; there are many chipped areas; but smoothing of the edge is most noticeable. The smoothing and rounding of the edge continues to the pointed end and down the other long edge of the stone to the partial pecked hollow. The entire surface of the stone has small nicks and other discrete areas of wear. One of the most noticeable features of the stone is that one third of the area encompassing the point, and including the two adjacent hollows, is burnt. Here, the colour of the sandstone has changed to a pale orange. It is likely that the burning is due to the stone being used as an anvil rather than being burnt in a fire.

Suitable boulders or blocks of stone were often used as anvils on sites with metalworking. One large example described as a possible anvil was a round stone with polish, scorching and a circular depression, found in a modern disturbance over the rampart at Dunadd (Lane & Campbell 2000, 192, Illus 4.104). None was apparently found at Mote of Mark in spite of the copious evidence of metalworking.

The Trusty's Hill example is only partial. Hammering metal on the stone caused fragments of the block to break off, so the original size of the stone is not known. It is quite likely that fractured stones would be discarded and the rampart rubble collapse (5013) context of its deposition suggests that it had been re-used in the fabric of the rampart.

Discussion of coarse stones and stone tools

The stone assemblage from Trusty's Hill has much in common with those found at the hillforts of Dunadd and Mote of Mark, and also the settlement of Whithorn. The radiocarbon dating evidence from the deposits at Trusty's Hill clearly provides an early medieval date for the range of stone tools and other artefacts that were found there. Although the 2012 excavations were limited in extent, they revealed a range of stone tools that give some insight into the occupation of Trusty's Hill.

The excavations at Mote of Mark recorded 26 stone artefacts (Laing & Longley 2006, 93–5) and those from both Dunadd (Lane & Campbell 2000, 177–96) and Whithorn (Chadburn *et al.* 1997, 443–64) considerably more. Common to these sites were querns, although the Trusty's Hill and the Mote of Mark examples, both recorded from earlier excavations in the twentieth century, have been lost. Grinders and pounders, possibly with uses other than food preparation, were found at both Dunadd and Mote of Mark but not in the trenches excavated at Trusty's Hill. Other stone artefact types not found at Trusty's Hill include those associated with metalworking, such as moulds and clearly defined whetstones, and counters or playing pieces indicating activities such as the playing of games. Whorls or spindle whorls were, however, found at all these sites.

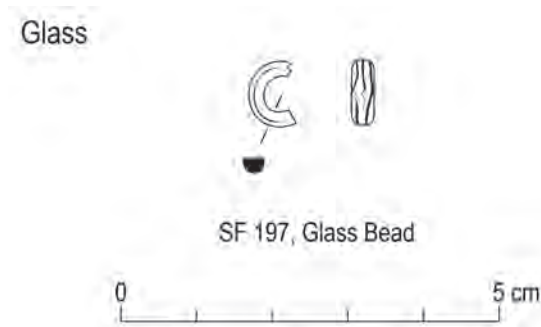


Fig. 4.21. Glass bead from Trusty's Hill

In spite of the reduced stone artefact assemblage, there are ample indications of metalworking at Trusty's Hill (see Campbell, Cruickshanks & Fraser above), such as the anvil stone, moulds made from other materials and possibly the rubbing and burnishing stones, although these last artefact types were perhaps most likely used on other, softer materials. The presence of these general and specific tool types, albeit in low numbers, indicates that Trusty's Hill formed part of a wider social and economic network in the early medieval period. Evidence for domestic activities is weak but this could simply reflect where the excavation trenches were placed and the limited area excavated.

What makes Trusty's Hill different in its outlook and possible function as a hillfort, in comparison with Dunadd and Mote of Mark, is the collection of slingstones found near its defences. Neither of the latter two sites had stones of this type for defence. The collection of slingstones and their stock-piling for use implies a threat, either from neighbours or from others from further afield. The stones were located on the east side of the summit, positioned close to the defences on the south-eastern side of the hill, where the contours were less severe and where the approach to the entranceway lay.

Glass

Glass bead

Fraser Hunter

The yellow glass bead (SF 197), from the construction layer (5017) on the west side of the summit of Trusty's Hill, opens up a range of intriguing stories about the site. Its form, annular with flattened surfaces (Fig. 4.21) and opaque yellow colour (Fig. 4.22) are typical of Guido's class 8 (1978, 73–6), shown by recent finds from well-dated contexts to be a phenomenon in Scotland of the second century BC–second century AD; indeed, some dates could support an origin as early as the later fourth century BC (Hunter



Fig. 4.22. Glass bead from Trusty's Hill

forthcoming b; Ashmore 2005, 166). At face value, this implies an Iron Age phase to the site, or an extended use-life for this bead, greater than its visible wear would suggest. But there is a complicating factor, the presence of opaque yellow glass beads in Anglo-Saxon contexts, including annular forms (Guido 1999, 36–8). Guido notes that these are impossible to distinguish visually but can be distinguished analytically (*ibid.*). Here, the use of antimony as a colourant places the Trusty's Hill bead in a firmly Iron Age context (see Davis below); indeed, Davis argues that the best compositional parallels are to Middle Iron Age beads, providing some additional support for the earlier part of the type's date range. Thus, the composition of the Trusty's Hill bead and the limited wear suggest an Iron Age activity phase at the site.

Past discussions have focused on the idea of relatively few production centres for such beads, one in north-east Scotland and one in Somerset, but this seems to be misleading. Henderson's analytical discrimination (1991, 124–5) between these two areas (the north-east using lead-tin oxide colourants, Somerset using lead antimonate) has also proved to be over-simplistic. Work on the assemblage from Culduthel near Inverness (Davis & Freestone forthcoming) demonstrates the production of class 8 beads from imported (antimony-coloured) ingots at the site, but also the import of (tin-coloured) beads; Henderson's pilot work on Irish beads (1987a) similarly indicated a different regional tradition, here using tin rather than antimony colourants in a pre-Roman context. The production of glass

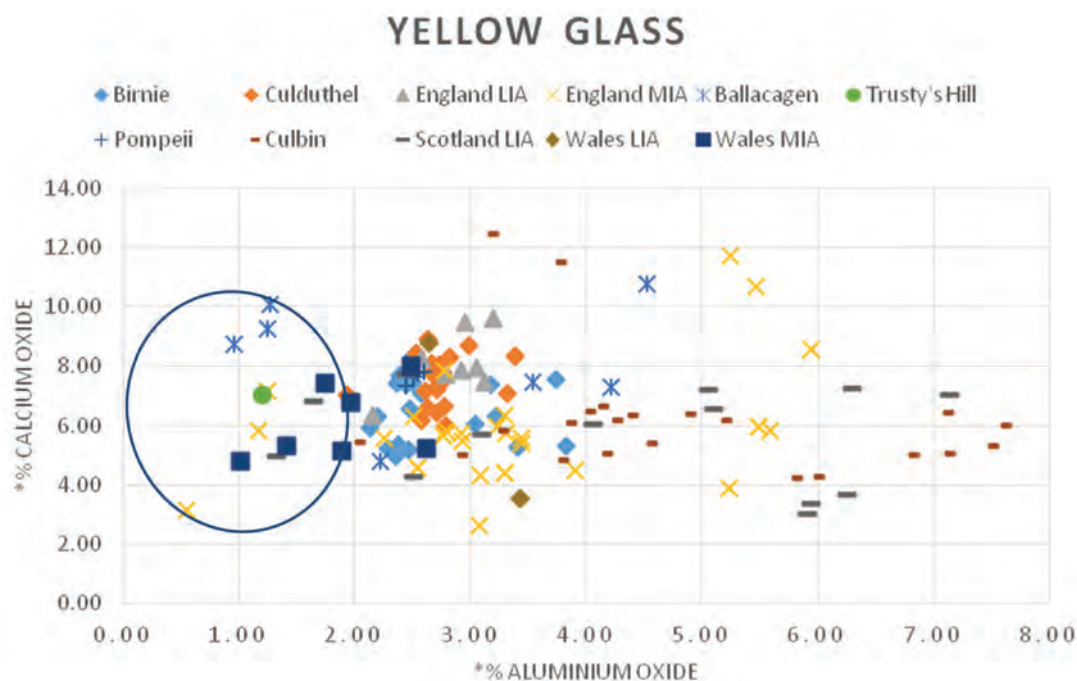


Fig. 4.23 Scatter diagram of alumina versus lime in yellow glass; the group on the left hand side (blue circle) are predominantly Middle Iron Age (MIA) as opposed to Late Iron Age (LIA). The scatter diagrams do not use copper, antimony and lead oxide contents; these totals are subtracted, and the remaining total normalised to 100% to give a more accurate indication of the initial glass composition before the addition of colourants; * indicated where limited elements have been used

jewellery in the Iron Age of south-west Scotland is confirmed by finds of yellow glass ingots from the fort of Dunagoil in Bute (unpublished; finds examined in Bute Museum) and by the presence of unusual globular beads at Luce Sands in Galloway, some deformed and thus likely to be wasters (Hunter *et al.* forthcoming). Class 8 beads have a wide distribution, though the map in Guido (1978, fig. 25) is outdated, with finds from Burnswark in Dumfriesshire adding to the south-western spread (Jobey 1978, 94).

SF 197 Annular bead fragment in opaque yellow glass; two-thirds survives (Fig. 4.21). D-sectioned, with flattened faces which show slight wear. The glass has some air bubbles and slight colour variation in the form of circumferential trails of a brighter yellow, suggesting variation in the melt and indicating that the bead was formed by twisting a rod into a circle rather than piercing a blob of glass. A slight dark stain on the interior derives from the iron rod used as a former. External diam. 8–9 mm; internal diam. 4.8 mm; height 3.3 mm. Soil sample 029, Context 5017, Trench 5.

Elemental analysis of glass

Mary Davis

Elemental analysis of five fragments, recovered during the post-excavation processing of soil samples and provisionally identified as glass, was carried out using a CamScan Maxim 2040 scanning electron microscope (SEM) fitted with an Oxford Instruments energy

dispersive X-ray detector and INCA spectrometer (EDS). Operating conditions employed a 30° take-off angle, a 20 kV accelerating voltage, and the samples were analysed for 100 seconds livetime with a beam current which yielded a count rate of *c.* 4000 counts per second when on a metallic cobalt standard. The spectrometer was calibrated using pure elements, oxides and minerals; for lead, a leaded glass standard was used where high concentrations of lead oxide were present. Corning A-D (Brill 1999) and a range of commercial glass standards were used to evaluate accuracy and precision. To avoid unnecessary damage, the objects were sampled using a diamond-coated file to score across a small section of the surface of the object to produce fine glass flakes. The procedure was originally assessed to be suitable for the classification of glass types and to allow useful conclusions to be drawn about raw materials, provenance and date, although not as accurately and precisely as for mounted and polished samples (Bronk & Freestone 2001). As expected, using the flake method the overall percentage totals departed from 100% due to the variable geometry. As observed by Bronk and Freestone (*ibid.*) the standard deviation for the flakes was slightly greater than that for polished samples; also as with the polished samples, the largest standard deviations were for sodium, possibly due to its volatility in the electron beam, and lead, antimony and tin, probably due to uneven dispersal of these metal compounds within the glass matrix, especially

Table 4.11 Results of the elemental analysis of the small opaque yellow annular bead (SF 197)

Na_2O	MgO	Al_2O_3	SiO_2	P_2O_5	SO_3	Cl	K_2O	CaO	TiO	MnO	Fe_2O_3	CuO	Sb_2O_3	PbO
13.1	0.5	1	54.7	0.1	bd	1	0.5	5.5	0.1	0.1	2.5	0.2	1.2	19.7

(bd = below detection level)

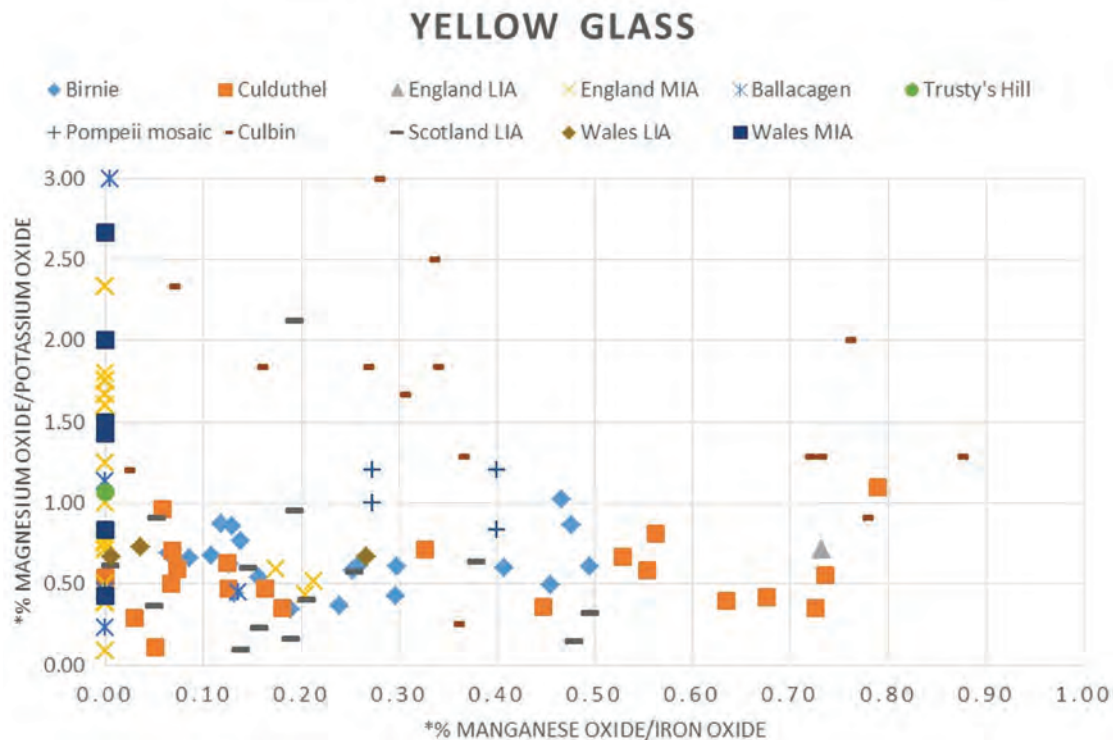


Fig. 4.24. Scatter diagram of manganese oxide/iron oxide versus magnesia/potash in yellow glass

when used as opacifiers. Analyses were normalised to totals of 100% so they could be compared to one another and to other analyses.

YELLOW GLASS BEAD FRAGMENT

The results of the elemental analysis of the small opaque yellow annular bead (SF 197) show that the glass is a mineral soda-lime silica glass coloured yellow by lead antimonate (Table 4.11). The analysis points to Middle Iron Age rather than Late Iron Age composition (Fig. 4.23).

Alumina is likely to have been incorporated into the glass with the silica as a naturally occurring impurity; its concentration therefore reflects the raw material and may be used to provide an initial impression of production-related groupings. The majority of Late Iron Age yellow glass contains two to three percent alumina, but there is a clear group, including the Trusty's Hill bead, which contain less than 2% and are predominantly from the Middle Iron Age period (defined by the blue circle in Fig. 4.23). The English examples come from Meare East,

Meare Lake Village and Glastonbury (Henderson 1987b, 170–82; 1995, 155–60); there are also four from Twyn y Gaer, and three from Ballacagen on the Isle of Man; the two Late Iron Age beads from Scotland are both Guido Class 8 beads from Glenluce (Guido 1978, 73–6). An equally, if not more significant pattern can be seen between Middle Iron Age and Late Iron Age yellow glass when manganese oxide/iron oxide is plotted against magnesia/potash (Fig 4.24). There are relatively consistent amounts of magnesia/potash for Late Iron Age glass; this is much more variable for Middle Iron Age yellow glass. However, in contrast, Middle Iron Age glass mostly contains no manganese/iron oxide. The Trusty's Hill glass bead fits well with this group of beads.

CLEAR GLASS SHARD

The lack of chlorine and iron oxide, and the addition of barium oxide (Table 4.12) indicate that the glass shard (SF 194), recovered from an occupation deposit (4020) in Trench 4 on the eastern side of the summit, is a modern soda-lime-silica glass.

Table 4.12 Results of the elemental analysis of glass shard (SF 194)

<i>Na₂O</i>	<i>MgO</i>	<i>Al₂O₃</i>	<i>SiO₂</i>	<i>P₂O₅</i>	<i>SO₃</i>	<i>Cl</i>	<i>K₂O</i>	<i>CaO</i>	<i>TiO</i>	<i>MnO</i>	<i>Fe₂O₃</i>	<i>CuO</i>	<i>BaO</i>	<i>PbO</i>
17.1	2.7	1.7	71.4	bd	0.5	bd	0.6	4.4	0.1	bd	bd	0.1	1.1	0.1

(bd = below detection level)

Table 4.13 Results of the elemental analysis of haematite cube (SF 196)

<i>Na₂O</i>	<i>Al₂O₃</i>	<i>SiO₂</i>	<i>P₂O₅</i>	<i>SO₃</i>	<i>CaO</i>	<i>TiO</i>	<i>Fe₂O₃</i>	<i>NiO</i>	<i>CuO</i>	<i>As₂O₃</i>	<i>PbO</i>
0.4	1.9	1.8	3.5	0.2	0.7	0.4	90.2	0.1	0.1	0.1	0.2

Table 4.14 Results of the elemental analysis of two red garnet fragments (SF 193 & 195)

<i>Find</i>	<i>Na₂O</i>	<i>MgO</i>	<i>Al₂O₃</i>	<i>SiO₂</i>	<i>P₂O₅</i>	<i>SO₃</i>	<i>K₂O</i>	<i>CaO</i>	<i>TiO</i>	<i>Cr₂O₃</i>	<i>MnO</i>	<i>Fe₂O₃</i>	<i>CuO</i>	<i>As₂O₃</i>
193	0.1	20	21.1	40.8	0.1	0.1	bd	4.4	0.5	2	0.4	10	0.2	1
195	0.2	19.6	20.5	40.1	bd	0.1	bd	4.7	0.7	2	0.4	11.2	0.3	0.5

(bd = below detection level)

HAEMATITE CUBE

Results indicate the substance of this small red cube (SF 196) is haematite (Table 4.13), which can occur in a dull to bright rust-red colour with either an earthy (red ochre) or a metallic luster. Although it is predominantly composed of ferric oxide (Fe₂O₃), it also commonly contains minor amounts of other elements such as titanium and aluminium. This was recovered from the construction layer (5017) in Trench 5 on the western side of the summit.

RED PYROPE GARNET FRAGMENTS

Elemental analysis reveals these two translucent red fragments (SF 193 & 195), recovered from construction layer (4016) and dark soil deposit (4007) respectively, are two small red pyrope garnets (Table 4.14); these have a general formula of Mg₃Al₂(SiO₄)₃, although magnesium ions can be replaced by iron and calcium ions. The addition of 1.5–2.5% chromium oxide results in a red rather than a violet colour. The composition of

these two pieces closely resembles Bohemian garnets analysed by Seifert and Vrána (2005).

DISCUSSION OF RED PYROPE GARNET FRAGMENTS

Alice Blackwell

Garnets feature widely in Anglo-Saxon ornamental metalwork, and the presence of two fragments at Trusty's Hill may be a further indicator of contact with the Anglo-Saxon world. However, garnetiferous rock occurs locally and tiny fragments can be introduced through the utilisation of stone objects such as querns. At present, elemental analysis of local sources of garnet is unavailable and so it remains possible that these tiny fragments are from a native rather than imported source. Further analysis of the fragments is planned in collaboration with Römisch-Germanisches Zentralmuseum für Archäologie (Mainz) as part of a research project to reassess the identification of garnet sources in early medieval Europe.

Environmental evidence

Animal bone

Karen Deighton

A total of 4.2 kg of animal bone was collected by hand during the excavation at Trusty's Hill. This material was analysed to aid the understanding of the site's economy. The material was sorted into recordable and non-recordable fragments. Identification of large mammals was aided by Schmid (1972) and the Max Planck Institute. Prummel (1987) was consulted for neonates of the major domesticates. Quantification followed Halstead (1985) after Watson (1979) and used minimum anatomical element. The following were recorded for each element: context, anatomical element, taxa, proximal fusion, and distal fusion, side,

Table 5.1 Summary of taxa present

<i>Taxa</i>	<i>Rock-cut basin (Trench 2)</i>	<i>Summit (Trenches 4 & 5)</i>
Horse		1
Cattle	1	68
Sheep/goat	2	8
Pig		20
Large ungulate	1	18
Small ungulate	1	16
<i>Total</i>	<i>5</i>	<i>131</i>

Table 5.2 Taxa by element for Trench 2 (total 5)

<i>Element</i>	<i>Cow</i>	<i>Sheep/goat</i>
Proximal radius	1	1
Distal radius	1	1
Tooth	1	
<i>Total</i>	<i>3</i>	<i>2</i>
<i>Relative percentage</i>	<i>60</i>	<i>40</i>

preservation, fragmentation, modification, butchery evidence and sex (where appropriate). Vertebra and ribs (with articulating ends) were counted and noted as small or large ungulate but not included in quantification as their multiple numbers introduce bias. Recording of fusion followed Silver (1969). Cattle teeth were aged after Halstead (1985) and pig teeth after Bull and Payne (1982). Recognition and recording of butchery followed Binford (1981). Recording of sexing data for pigs followed von den Driesch (1976). Pathology was described after Baker and Bothwell (1980).

The results are set out in Tables 5.1–5.4. The assemblage was limited to the major domesticates and

Table 5.3 Taxa by element for Trenches 4 and 5 (total 99)

<i>Element</i>	<i>Horse</i>	<i>Cattle</i>	<i>Sheep/goat</i>	<i>Pig</i>
Scapula		1	1	
Proximal humerus		2		3
Distal humerus		5		5
Proximal radius		2		1
Distal radius		6		
Ulna		2	1	
Proximal metacarpal		2		
Distal metacarpal		3		
Pelvis		2		1
Proximal femur		5	1	2
Distal femur		2	1	1
Proximal tibia		5	2	
Distal tibia		5	2	1
Calcaneum		1		
Proximal metatarsal		4		
Distal metatarsal		2		
Phalanx 1		1	2	
Phalanx 2		2		
mandible				1
Tooth	1	16		5
<i>Total</i>	<i>1</i>	<i>68</i>	<i>10</i>	<i>20</i>
<i>Relative Percentage</i>	<i>1</i>	<i>69</i>	<i>10</i>	<i>20</i>

Table 5.4 Ribs and vertebra

<i>Element</i>	<i>Rock-cut basin (Trench 2)</i>	<i>Summit (Trenches 4 & 5)</i>
Large rib	1	13
Large vertebra		4
<i>Total large ungulate</i>	<i>1</i>	<i>17</i>
Small rib	1	16
Small vertebra		1
<i>Total small ungulate</i>	<i>1</i>	<i>17</i>

dominated by cattle. Much of the faunal assemblage was recovered from the occupation deposits (4008 & 4020), construction layer (4016), rampart core (4004) and dark soil deposits (4007 & 4011), interior structure collapse (4005), collapsed rampart face (4010) and backfill deposits (4002, 4003, 4006, 4009, 4012–4014) in Trench 4 on the eastern side of the summit. The construction layer (5017), rampart core (5002, 5005, 5012, 5018 & 5022), collapsed rampart face (5010/5011), dark soil deposit (5014), rampart collapse (5007) and backfill deposit (5003) in Trench 5 on the western side of the summit yielded the bulk of the remainder of the faunal bone assemblage. Only a very limited number of faunal bones were recovered from the primary fill (2007) and backfill (2005) of the rock-cut basin in Trench 2 near the entranceway.

Fragmentation was heavy with 29% of bone fragments falling into the splinter or end plus splinter category (Table 5.5). This could be the result of heavy handed butchery techniques, trampling or compaction within the burial matrix. Eight fresh breaks were also noted.

Abrasion of bone surfaces was high possibly due to soil action or weathering due a period of exposure above ground (Table 5.6). The frequency of canid gnawing was high at 29.6% (noted on 29 bone elements) which not only suggests the presence of dogs/foxes at site but again also indicates that the bone was left exposed (*e.g.* in open middens) before its final deposition. It should also be noted that such a high level of gnawing could possibly have introduced a preservation bias away from the smaller bones and smaller taxa as well as away from neonatal/juvenile bones (Payne & Munson 1985). More subtle evidence of butchery could also have been obscured. Evidence for butchery, in fact, was low, which could be due to obscuring by post taphonomic processes (such as canid gnawing), but where evident was consistent with chopping.

The frequency of evidence for burning was moderate at 16% of identified fragments. A further 899 indeterminate calcined fragments (weight 381 g) were noted, which made up 40% of the assemblage. Calcining suggests temperatures above 1000 degrees centigrade.

Table 5.5 Fragmentation by faunal bone element

	<i>Rock-cut basin (Trench 2)</i>	<i>Summit (Trenches 4 & 5)</i>
Whole	2	4
Some shaft missing		6
End plus shaft		5
Cylinder		6
Splinter		13
End plus splinter	1	13
Fresh break		8

Table 5.6 Abrasion of faunal bone elements

<i>Taxa</i>	<i>Rock-cut basin (Trench 2)</i>	<i>Summit (Trenches 4 & 5)</i>
Canid gnawing	1	18
Burning	1	28
Butchery	0	4

Table 5.7 Tooth eruption and wear

<i>Context</i>	<i>Taxa</i>	<i>Element</i>	<i>Side</i>	<i>Age category</i>
4006	Cattle	mandible	right	Young adult
4006	Pig	mandible	left	4–6 months
4009	pig	mandible	left	4–6 months

Sources of evidence for ageing faunal remains consist of epiphyseal fusion, tooth eruption and wear and the presence of neonatal/juvenile bone. For Trusty's Hill all three sources were sparse. Only three check tooth rows were available for analysis of tooth eruption and wear (Table 5.7). A number of worn cattle first/second mandibular molars were present but these could not be attributed to a single wear stage. Only five possible juvenile bone elements (two cattle bone elements and three pig bone elements) were noted and most long bones fell into the fusion indeterminate categories. Consequently no kill-off patterns could be discerned. Evidence for sexing was limited to a single male pig canine and was also therefore inconclusive. Unfortunately no bones were complete enough for measurements to be taken, nor were any pathologies evident. Comparisons between the assemblages from the rock-cut basin and summit trenches are tentative due to the small size of the assemblage but no change in the dominant taxa can be discerned.

Comparisons between the Trusty's Hill assemblage and assemblages from other sites are also tentative due to the paucity of material available and its poor preservation. However Trusty's Hill seems to fit a pattern for the dominance of cattle, followed by

pig seen at Buckquoy (Noddle 1977, 208), Dundurn (Alcock *et al.* 1989, 222), Dunollie (Hodgson & Jones 1987), the Mote of Mark (Bourdillon 2006, 134–5) and Dunadd (Noddle 2000, 226). However, all the above mentioned sites also show a greater reliance on sheep/goat than is seen at Trusty's Hill. Data for butchery is sparse from most sites, but as suggested at Trusty's Hill, also appears to have been heavy handed at Buckquoy and Dunollie. A sizeable quantity of calcined bone (7354 g) was also noted at Dunadd, which was attributed to deliberate burning as a fuel source for metal working, waste disposal or as a method of keeping fires burning at a low level to avoid the need for rekindling (Wysocki 2000, 229).

An incomplete picture of the animal economy is available due to the nature of preservation at the site, but analysis does suggest a reliance on the major domesticates and has similarities in this respect with contemporary sites. Furthermore, dominance of cattle and the use of heavy handed butchery techniques are also prevalent.

Soil micromorphology

Laura Hamlet

Soil/sediment samples were recovered from Trusty's Hill using Kubiëna tins for thin-section micromorphology. This microscope based investigative technique can provide a detailed consideration of finer discrete stratigraphies which are not always visible in the field such as burning, construction and domestic or agricultural activities (*e.g.* Simpson *et al.* 1999; 2003; 2011). Understanding how archaeological contexts have formed is considered potentially very significant to understanding occupation of a site. A Kubiëna tin sample (051) was taken at the intersection of contexts (4007 & 4003) related to the destruction of the ramparts in Trench 4 on the eastern side of the summit (see Fig. 2.6). Another Kubiëna tin sample (052) was taken from the construction layer (5017) in Trench 5 on the western side of the summit (see Fig. 2.13). A monolith block sample (050) was also taken from the intersection of rock-cut ditch fill (6002) and natural subsoil (6004) in Trench 6 on the northern side of the site (see Fig. 2.20), but the subsequent extraction of a Kubiëna tin sample from this in the laboratory was not successful.

Manufacture of thin-sections from Kubiëna tin samples was carried out using the following method: all water was removed from the samples by acetone exchange, the samples were then impregnated using polyester 'crystic resin type 17449' and the catalyst Q17447 (methyl ketone peroxide, 50% solution in phthalate). The mixture was thinned with acetone and a standard composition of 180 ml resin, 1.8 ml

catalyst and 25 ml acetone used for each Kubiëna tin. An accelerator was used and the samples were impregnated under vacuum to ensure complete outgassing of the soil. The impregnated soils were cured, culminating with a period in a 40°C oven. Resin impregnated soils were sliced, bonded to a glass slide and precision lapped to 30µm thickness, and cover slipped to complete the manufacture of the thin section.

By following procedures laid out in the International Handbook for Thin Section Description (Bullock *et al.* 1985) and the most recent methods of Stoops (2003), soil properties were recorded semi-quantitatively on a standard table designed to work alongside research objectives, and adapted specifically for each context. The thin sections were analysed using Olympus BX-50 and Olympus BH2-RFL petrological microscopes at a range of magnifications ($\times 10$ – $\times 400$) and with several different light sources including UV for phosphorous detection. Plane polarised light (PPL), crossed polarized light (XPL) and oblique incident light (OIL) each allow identification of specific microscopic features, such as, mineral and organic components, pedofeatures and fuel residues. Interpretation of the observed features rests on accumulated evidence (Courty *et al.* 1989; FitzPatrick 1993; McKenna & Simpson 2011).

Past work has demonstrated that thin section micromorphology can illustrate the processes involved in deposition, pedogenesis, parent material and any changes incurred thereafter which may include environmental, climatic or anthropogenically triggered events.

Results

Sample 051 was recovered from the intersection of rampart collapse (4003) and dark soil (4007; see Fig. 2.6). In thin section there was a single microstratigraphic unit (Fig. 5.1; Table 5.8) with a granular microstructure composed of sub-angular aggregates which each exhibited an open porphyric coarse fine related distribution. Larger coarse fragments of rock and charcoal coated in fine organo-mineral were chitonic and were unsorted. Within the aggregates of fine material however, coarse minerals were actually well sorted. The total coarse mineral component of the slide was comprised of quartz (5–10%), greywacke fragments (10–15%), siltstone fragments (15–20%) and mica (<1%); of these, 5–10% are rubified indicating heating. A single turf fragment present near the bottom of the slide was rubified and may represent a ground fire or domestic fuel residues. The fine fabric was very dark brown and black organo mineral in PPL, which hues dark brown in OIL. The majority of the granular aggregates were composed of the dark brown-black organo mineral fine fabric



Fig. 5.1. Sample 051 thin-section scan showing a granular structure and a single microstratigraphic unit

and contained large charcoal fragments (5–10%), well decomposed plant material (1–2%) (including amorphous yellow fine material interpreted as plant derived, 1–2%) and phytoliths (<1%). There were also bone fragments present, either burned with medium intensity (1–2%), high intensity (<1%) (Hanson & Cain 2007) and low intensity or unburned with good preservation evidenced by strong interference colours in XPL (Karkanas & Goldberg 2010). Several of the larger aggregates exhibited a subtle change in colouration of the fine fabric from one end to the other (Fig. 5.2). In these discrete areas the colour was lighter brown and contained charcoal (smaller fragments than in the darker areas), clay aggregates (<1%) and well decomposed plant material but no bone. One aggregate which contains this colour shift is oriented in the opposite direction to the others, suggesting the possibility that the profile had been disturbed at some point, a hypothesis further supported by the granular microstructure and the presence of sandy (<1%) and dusty (<1%) clay pedofeatures throughout the slide. The three different types of infill/coating clay

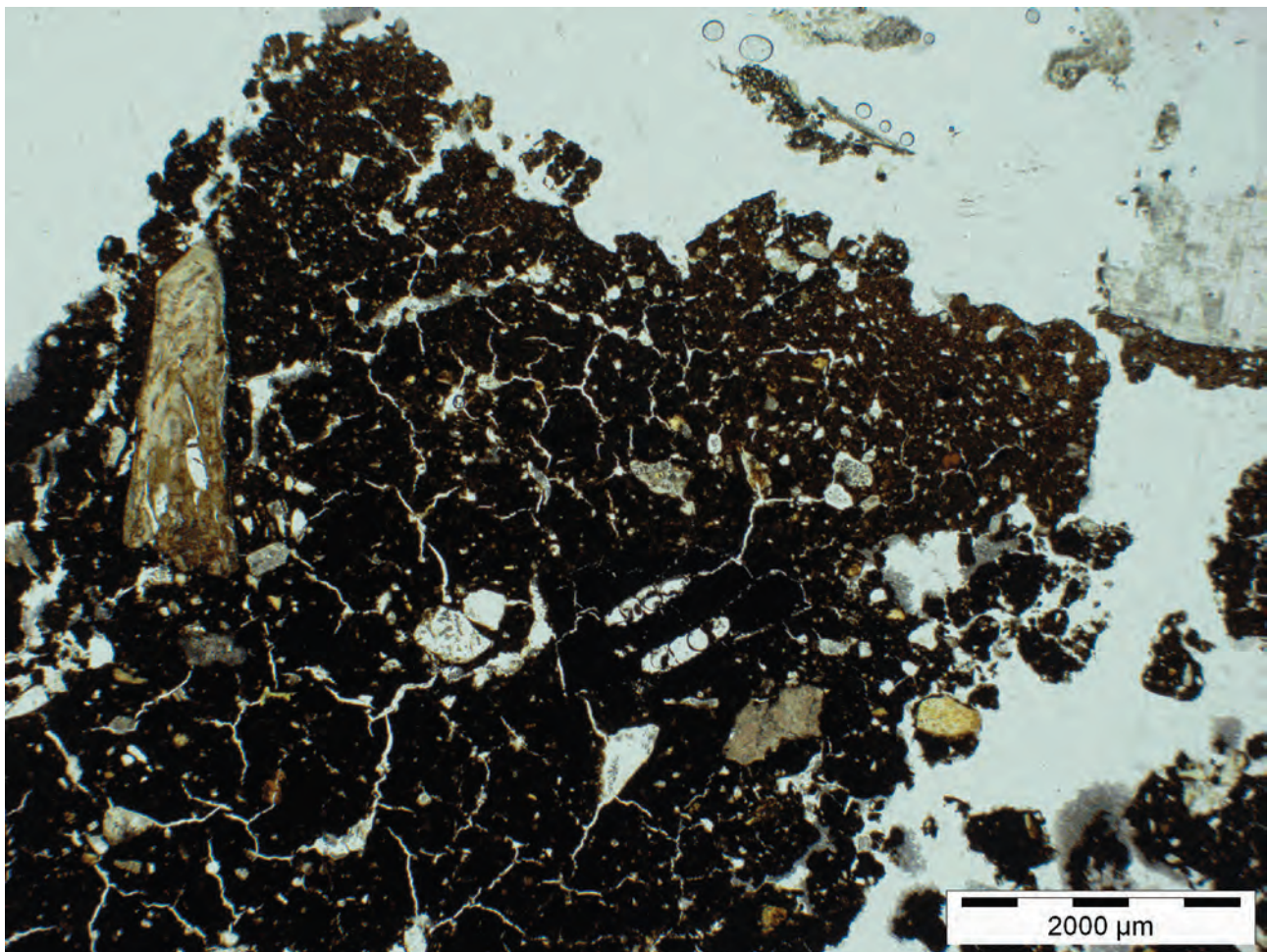


Fig. 5.2. Sample 051: aggregate of fine material exhibiting sub angular blocky separation; note the subtle difference in colouration near the top (PPL)

Table 5.9 Results of thin-section analysis Sample 052 from Trench 5

Sample number	Context(s)	Microstratigraphic unit	MICROSTRUCTURE	COARSE/FINE RELATED DISTRIBUTION	COARSE MINERAL ARRANGEMENT	Coarse material (> 63µm)			Fine material (< 63µm)			Pedofeatures
						Mineral component	Organic component		Mineral component	Organic component		
052	B	Compacted crumb or granular	OP	Random, poorly sorted	COARSE MINERAL ARRANGEMENT	Quartz						
						Feldspar	4	1	3	1	1	
						Greywacke fragments	4	1	3	1	1	
						Compound quartzite	4	1	3	1	1	
						Siltstone	4	1	3	1	1	
						Mica	4	1	3	1	1	
						% rubified	4	1	3	1	1	
						Turf fragments	4	1	3	1	1	
						Slag	4	1	3	1	1	
						Well decomposed plant	4	1	3	1	1	
5017	A	Channels, chambers and vughs	OP	Random, unsorted	COARSE MINERAL ARRANGEMENT	Charcoal	5	2	7	2	1	
						Unburned/ low intensity	5	2	7	2	1	
						Medium intensity	5	2	7	2	1	
						High intensity	5	2	7	2	1	
						Nature of fabric (PPL)	5	2	7	2	1	
						b-Fabric (XPL)	5	2	7	2	1	
						Phytoliths	5	2	7	2	1	
						Punctuations	5	2	7	2	1	
						Amorphous yellow	5	2	7	2	1	
						Amorphous black	5	2	7	2	1	
5017	A	Channels, chambers and vughs	OP	Random, unsorted	COARSE MINERAL ARRANGEMENT	Fungal tissue	5	2	7	2	1	
						Limpid clay infill/coatings	5	2	7	2	1	
						Silty clay infill/coatings	5	2	7	2	1	
						Sandy clay infill/coating	5	2	7	2	1	
						Iron accumulation	5	2	7	2	1	
						Iron nodules	5	2	7	2	1	
						Clay aggregates	5	2	7	2	1	
						Excremental	5	2	7	2	1	
							5	2	7	2	1	
							5	2	7	2	1	

Frequency class refers to the appropriate area of section (from Bullock et al., 1985):

1 = (<1%) 2 = 1–2% 3 = 2–5% 4 = 5–10% 5 = 10–15% 6 = 15–20% 7 = 20–25% 8 = 25–30%

Frequency class for textual pedofeatures:

t = trace (<1%) ⊙ = Rare (1–2%) ⊗ = Occasional (2–5%) ⊗⊗ = Many (5–10%)

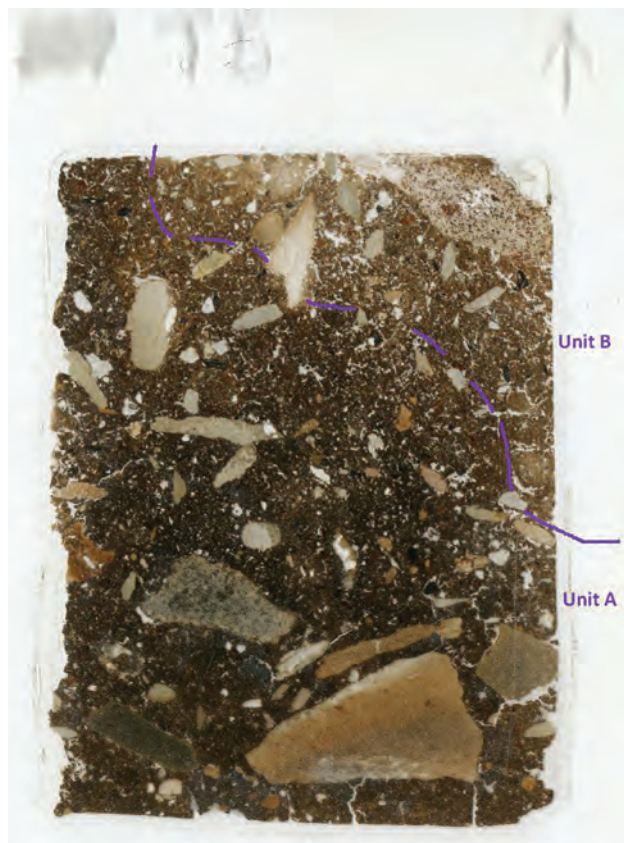


Fig. 5.3. Sample 052 thin section scan demonstrating microstratigraphic units

pedofeatures indicate three phases of disturbance; as these were not orientated clays, it may be of note that reworking of the soil either by digging or ploughing is often interpreted from these types of features (Adderly *et al.* 2010).

Sample 052 was recovered from construction layer (5017; see Fig. 2.13). In thin section there were two micro-stratigraphic units labelled A (lower) and B (upper; see Fig. 5.3; Table 5.9); the boundary between these two units was very subtle and bioturbation evidence by channels, vughs and excremental pedofeatures is likely to have caused blending. Unit A was characterised by dark brown organo-mineral fine material which contained channels, chambers and vughs but also an open porphyric coarse and fine related distribution (Fig. 5.4) demonstrating the compact nature of the sediment. The random distributed, unsorted coarse mineral constituents were as follows: quartz (10–15%), feldspar (1–2%), greywacke (20–25%), compound quartzite (1–2%), siltstone (<1%) and mica (<1%). Of these <1% exhibit rubification in OIL. Clayey turf fragments (2–5%) were also present and a piece of slag or clinker (<1%) (Fig. 5.5). The coarse organic components were well decomposed plant remains (<1%), wood charcoal (2–5%) and unburned or low intensity burnt bone

(<1%). The fine mineral material demonstrated weathering of the coarse minerals as it was stipple-speckled microcrystallitic and randomly distributed. The fine organic components were punctuations of black material (1–2%) with the morphology of grass charcoal (Umbanhower & McGrath 1998), amorphous auto-fluorescent yellow matter (<1%) which is interpreted as plant derived and amorphous black, probably carbon derived material (5–10). There was also fungal tissue (<1%) present. The many Fe rich limpid clay aggregates (<1%) and infill/coating pedofeatures (5–10%) demonstrate both low energy down profile movement with water percolation and allothonous inclusion or excremental reworking. Dusty clay infill/coating pedofeatures contributed 2–5% of the unit evidencing a period of slightly higher energy down profile clay illuviation. Iron nodules (5–10%) were anorthic and had not formed in situ indicating sediment formation via dumping of material from an iron rich context.

Unit B was distinguished via a lighter brown colouration of organo-mineral fine material than that exhibited in unit A. The microstructure was also slightly less compact and formed crumb or granular aggregates of fine material which had become homogenized to form an open porphyric coarse-fine related distribution pattern (Fig. 5.6). The coarse mineral components were poorly sorted and randomly distributed to comprise the following: quartz (5–10%), feldspar (<1%), greywacke (2–5%), compound quartzite (<1%), siltstone (10–15%) and mica (<1%). Of these coarse minerals <1% were rubified. There was a trace of fragmented turf (<1%) which was distinguished by its redder colouration and so interpreted as coming from a more Fe rich soil profile. Coarse organic constituents were well decomposed plant stems/roots (<1%), charcoal (1–2%) and unburned or low intensity burnt bone fragments (<1%). The b-fabric continued to exhibit a randomly distributed stipple speckled microcrystallitic nature. Fine organic punctuations were present, some with the micromorphology of wood charcoal (Umbanhower & McGrath 1998), as were yellow plant derived amorphous matter (<1%) and fungal tissue (<1%). The same limpid clay infill/coating pedofeatures were present as in unit A, demonstrating this material had percolated down from higher up the profile. Iron nodules (2–5%) were orthic and had formed in situ but the occasional clay aggregates (2–5%) were sub rounded and the internal silty particle fraction was un-orientated indicating these features had probably not formed *in situ*.

Discussion

Thin-section micromorphological evidence from Sample 051 from Trench 4 indicates this was a

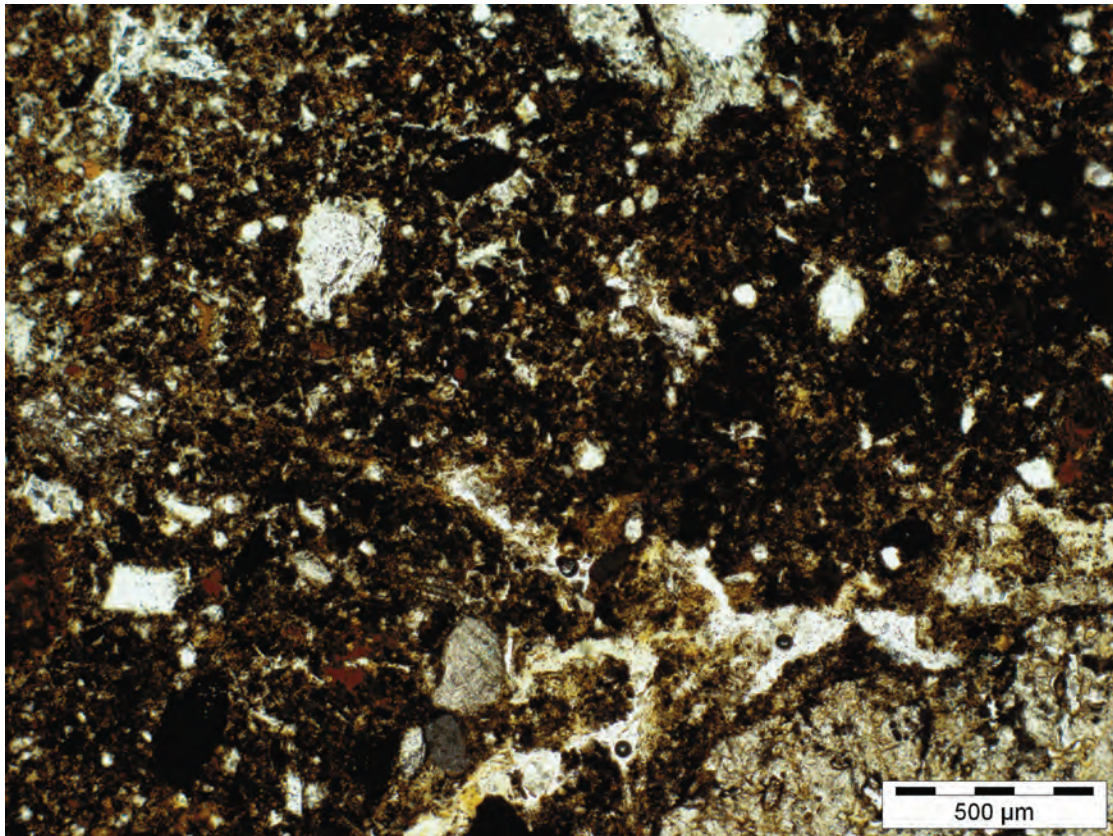


Fig. 5.4. Sample 052 groundmass unit A (PPL)

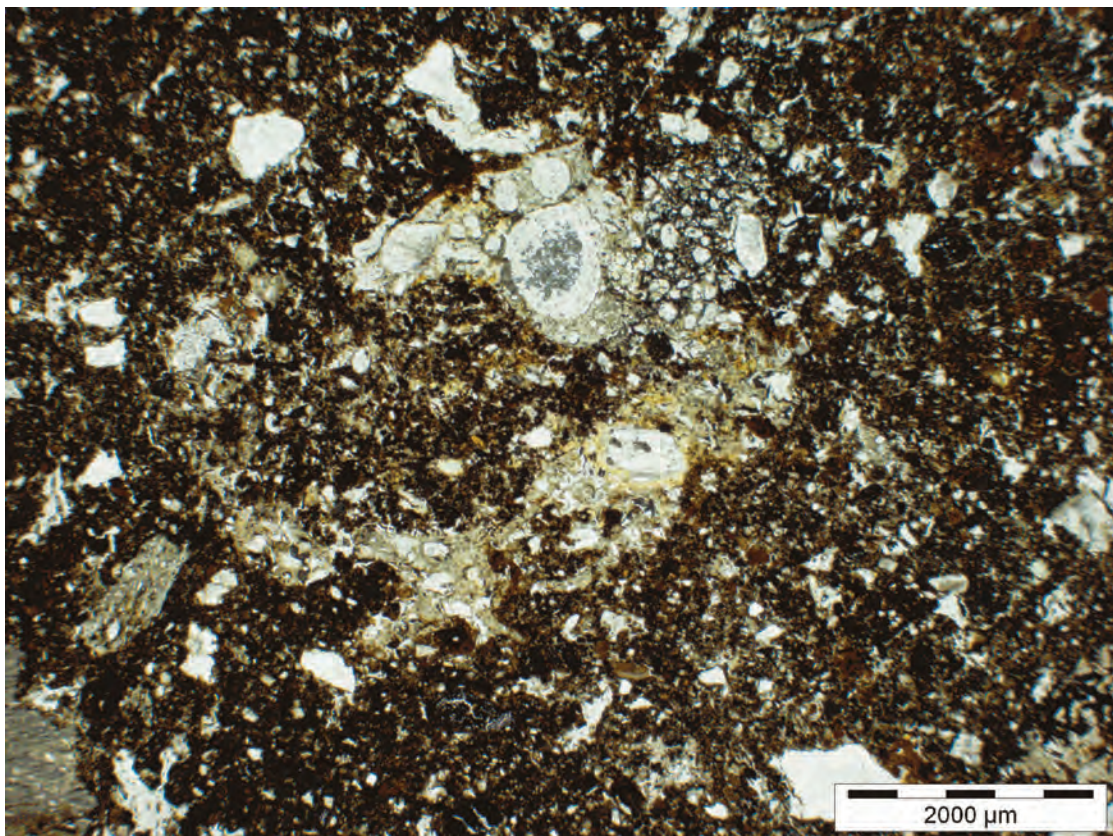


Fig. 5.5. Sample 052 slag or clinker in unit A (PPL)

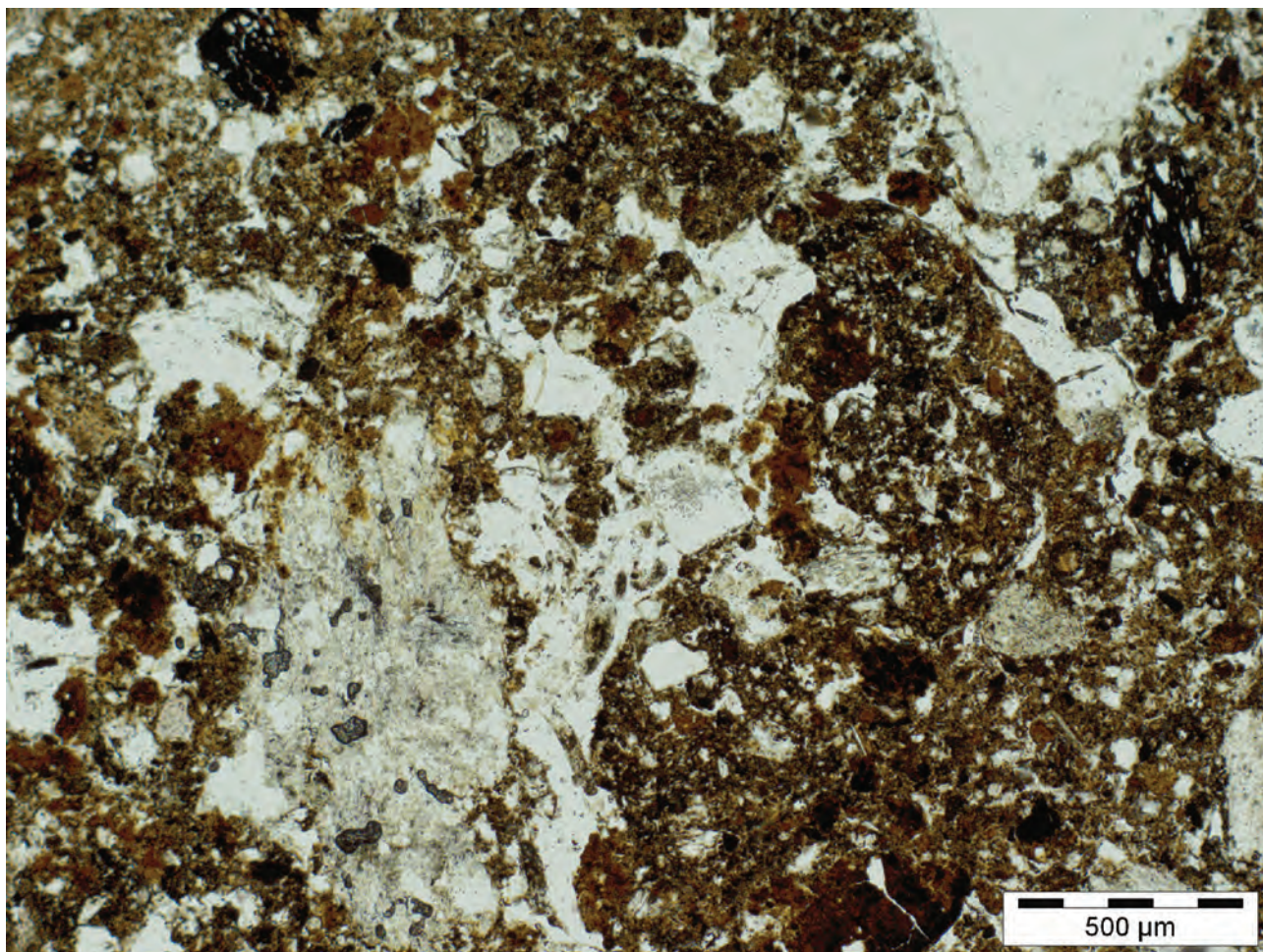


Fig. 5.6. Sample 052 groundmass unit B (PPL)

disturbed soil profile. The subtle colouration change noted in some of the aggregates described above suggests the survival of a sediment characterised by a dark matrix with anthropic inputs, suggesting that this sample derived solely from the lower dark soil (4007) of the context intersection, which was probably due to difficulties in extracting an intact sample from the excavation trench section (Toolis *pers. comm.*). In soil micromorphology very dark brown to black colouration is usually attributed to the presence of either Fe or Mn oxihydrates (Stoops 2003). Although iron accumulation is often seen in domestic contexts within floor surfaces (Gé *et al.* 1993) it results from iron reduction and subsequent mobilisation (Lindbo *et al.* 2010) which is indicative of a wet environment. The anthropogenic inputs are mostly unburned bone fragments or fragments which have been subjected to low intensity burning which suggests domestic origins and so midden material. The single burned turf fragment may represent a ground fire or domestic fuel residues. Although the sediment had clearly been destabilised, evidenced by the loss of structure and rubification of some coarse minerals, these were randomly distributed across the slide and unburned

bone fragments were well represented. These factors together with a lack of rubification of the fine fabric leads to the summation that *in situ* burning was not suspected.

The thin-section analysis for soil micromorphology found two microstratigraphic units in Sample 052 from Trench 5, representing two phases of sediment formation for context 5017. The earliest comprised anthropic sediments, clay aggregates, turf and coarse minerals in a fine matrix of dark organo-mineral fine material. The field interpretation of a construction layer is supported by the micromorphological analysis which also indicates the source of the construction material was an area of occupation. The construction materials in thin-section do not exhibit high densities of either phytoliths or organic matter which indicates that top soils and sub soils were preferred over O horizons. Clay aggregates and turf fragments demonstrate constructional material was also mixed with soil from Fe rich clayey turf and rock fragments derived from the local geology. The later micro-stratigraphic unit appeared to be cut into the earlier unit but contained excrements of soil meso-fauna which had mixed the boundary.

There were less anthropic derived sediments in this unit indicating increased use of soil derived materials and a decrease in anthropic sediment derived materials, rock fragments were also less well represented. Clay illuviation was present throughout the slide, indicating disturbance further up the profile. Such features have been recorded in soil profiles that have been disturbed mechanically (such as by ard or hoe) and so it is suggested that a wet environment (evidenced by down profile movement and *in situ* iron nodules) and quite heavy sediment disturbance further up the profile is a possible origin for these features in this context (Adderley *et al.* 2010; McKenzie 2006).

Conclusions

Although clearly reworked, the sediment (4007) seen in the aggregates in Sample 051 from the eastern side of the summit were composed of well compacted material. They also contained plant root and stem fragments which indicate a stable and vegetated environment. Given the evidence, it seems likely that this sediment was an active, trampled and wet lightly vegetated occupied land surface. A later accumulation of sediment may be evidenced by lighter coloured discrete areas in some of the aggregates. This contained fewer anthropic inputs and also became vegetated. Interpretation is limited by the poor representation of this material in the sample and so evidence of an occupational floor/ground surface is absent. The destabilisation of the soil structure does not appear to have been caused by a natural event and so rapid collapse is more likely. *In situ* burning was not evidenced in Sample 051.

Construction materials (5017) represented in Sample 052, from the western side of the summit, were sourced from both anthropic and natural sediments. Such mixing evidences a deliberate dump of materials which contained enough organic material to make it attractive to soil meso-fauna. The accumulation therefore was rapid and trampling was not evidenced, indicating anthropic material was not trampled in incidentally but imported deliberately and mixed with rock fragments, clayey turf and sub/top soil from an area of soil which had been subject to wetting and drying. Post-deposition, some heavy reworking of sediment higher up the profile than represented in the slide was evidenced by clay pedofeatures.

Archaeobotanical remains

Susan Ramsay

A programme of bulk sampling was undertaken in

order to examine the carbonised and waterlogged archaeobotanical remains recovered from Trusty's Hill. In addition, numerous spot finds of charcoal and wood were also recovered during the excavations. Twenty-eight bulk samples and 26 spot finds were analysed for the presence of carbonised remains. In addition, four bulk samples from the primary fill (2007) of the rock-cut basin in Trench 2 were analysed for the presence of waterlogged remains and wood from seven spot finds also from this context were also identified. The bulk carbonised samples were processed by flotation or wet sieving, using standard methods and sieves of mesh diameter 1 mm and 500 µm for flots and 2 mm for retents from flotation. A 500 ml subsample from each of the bulk waterlogged samples was wet sieved through sieves of mesh diameter 1 mm and 500 µm. The waterlogged wood spot finds were gently washed in water to remove any clay and silt that was still adhering to them.

For the carbonised bulk samples, dried flots and sorted retents were examined using a binocular microscope at variable magnifications of $\times 4$ – $\times 45$. For each sample, estimation of the total volume of carbonised material >2 mm and >4 mm was made and modern contaminants were scored using a scale of 1–3 + marks. For each sample, all charcoal fragments >4 mm were identified, together with any carbonised seeds or other plant macrofossils present within the samples. In terms of the charcoal spot finds, all fragments of charcoal >4 mm in the spot find were identified. The test characteristics of small seeds and the internal anatomical features of all charcoal fragments were further identified at $\times 200$ magnification using the reflected light of a metallurgical microscope.

For the waterlogged bulk samples, the >1 mm and >500 µm retents were scanned at magnifications of $\times 4$ – $\times 45$ and all seeds and other identifiable material removed for final analysis and identification. As the fragments of wood present in these samples were so numerous, only a representative number were fully identified. Wood from the bulk waterlogged samples and spot finds was first measured, the presence of any cut marks noted and any other notable features described. Fragments with cut marks were also photographed.

Reference was made to Schweingruber (1990) and Cappers *et al.* (2006) to aid identifications. Vascular plant nomenclature follows Stace (1997) except for cereals, which conform to the genetic classification of Zohary and Hopf (2000).

Results

ROCK-CUT BASIN

Trench 2 was located at the north-east side of the entranceway to the hillfort (see Fig. 2.1). The main

Table 5.10 Botanical remains from waterlogged bulk samples in Trench 2

	Description Context Sample	2007 23	Primary fill of rock-cut basin 2008 2007 31	2007 36	2007 48
Wood					
<i>Corylus</i>	hazel	5 (roundwood)	4 (roundwood) 5 (small frags)	3 (roundwood) 12 (small frags)	7 (roundwood) 13 (small frags)
cf <i>Corylus</i>	cf hazel	4 (small twigs)	—	1 (small frag.)	19 (small twigs)
<i>Quercus</i>	oak	—	2 (flat frag, cut marks) 2 (small frag)	3 (small frags)	—
<i>Salix</i>	willow	—	2 (roundwood) 2 (flat frag., cut marks) 1 (flat frag., no cut marks) 1 (small frag.)	—	—
indet bark		1	1	—	—
indet small twigs		—	—	8	—
indet thorn		—	—	2	—
wood fragments		++++	++++	++++	++++
Charcoal					
<i>Corylus</i>	hazel	4	—	2	—
<i>Quercus</i>	oak	3	—	2	—
Seeds					
<i>Carex</i> (biconvex)	sedge	1	—	—	—
<i>Carex</i> (trigonus)	sedge	—	1	1	2
<i>Chenopodium album</i>	fat-hen	—	1	2	1
<i>Chenopodium</i> cf <i>bonus-henricus</i>	Good King Henry	—	—	—	1
<i>Cirsium</i> sp	thistle	1	1	—	1
<i>Corylus avellana</i> nutshell frags	hazel nutshell frags	5	4	3	4
<i>Galeopsis tetrahit</i> sl	common hemp-nettle	7	13	13	26
cf <i>Knautia arvensis</i>	cf field scabious	—	1	—	—
<i>Linum usitatissimum</i>	cultivated flax	—	—	1	—
<i>Persicaria maculosa</i>	redshank	—	1	3	8
Poaceae	grass	—	—	1	—
<i>Potentilla</i> sp	cinquefoil	2	—	—	5
<i>Ranunculus acris</i> type	meadow buttercup	2	—	6	4
<i>Rubus fruticosus</i>	bramble	—	—	2	—
<i>Rubus idaeus</i>	raspberry	—	—	3	—
<i>Rumex</i> cf <i>acetosa</i>	cf common sorrel	6	3	6	9
<i>Sonchus asper</i>	prickly sow-thistle	—	1	3	1
<i>Stellaria/Cerastium</i>	stitchwort/mouse-ear	—	—	42	29
<i>Urtica dioica</i>	common nettle	>200	>200	>200	>200
<i>Torilis japonica</i>	upright hedge-parsley	1	—	—	—
<i>Viola</i> sp	violet	1	—	—	1
Indet	indet	1	—	—	—
Misc					
Fern pinnae		—	1	18	14
Moss stems		+	+	+	+
Caddis larva case		5	—	—	1
Insect remains		—	+	—	—
Fucoid seaweed (carb)		—	—	1	—

feature within this trench was a rock-cut basin [2008]. The primary fill (2007) of this basin was the only context examined for the presence of archaeobotanical remains from Trench 2. In total, four waterlogged bulk samples and seven spot finds of wood (SF 071–073, 116, 119, 121 & 177) were analysed and identified from context (2007). The results are shown in Tables 5.10 and 5.11.

The waterlogged bulk samples contained similar botanical assemblages. All contained abundant small fragments of wood, in addition to larger pieces of wood and these were considered in conjunction with the spot finds of wood also recovered from (2007). The wood was mainly hazel, with some oak and a

small amount of willow also present. The majority of the hazel was in the form of roundwood, ranging from small twigs to larger fragments up to 30 mm in diameter. Almost all of the hazel showed no evidence of working, with only one fragment (SF 116) showing a diagonal cut mark at one end. The pieces of oak wood identified tended to be either small fragments of flat planks or square sectioned stakes. The majority of the oak fragments showed some evidence for working in the form of cut marks at the ends. Willow wood was only recorded from one of the bulk samples, with small sections of flat ‘planks’ and some roundwood also recorded. There were no obvious cut marks on the willow fragments. The wood remains suggest that

Table 5.11 Wood spot finds from Trench 2

Context	Spot find	Identification & comments
2007	71	Fragment 1: <i>Corylus</i> (115 × 30 × 20 mm) half roundwood, slightly tapered at one end but not clearly worked Fragment 2: <i>Corylus</i> (60 × 12 × 12 mm) roundwood, slight bend in middle, no working Fragment 3: <i>Corylus</i> (240 × 35 × 35 mm) large roundwood, broken into 3 fragments, no obvious cut marks
2007	72	Fragment 1: <i>Corylus</i> (95 × 20 × 15 mm) roundwood, one end broken, other end possibly eroded, no cut marks
2007	73	Fragment 1: <i>Corylus</i> (110 × 18 × 18 mm) roundwood, bark present, broken into 3 fragments, no obvious cut marks
2007	116	Fragment 1: <i>Corylus</i> (220 × 30 × 30 mm) large roundwood, bark present, diagonal cuts at thickest end, possible cut at thinner end
2007	119	Fragment 1: <i>Corylus</i> (30 × 13 × 13 mm) roundwood, no obvious cut marks Fragment 2: <i>Quercus</i> (70 × 25 × 20 mm) probably shaped to square section, diagonal cut at one end to form wedge shape Fragment 3: <i>Quercus</i> (45 × 25 × 25 mm) Possibly shaped to square section but cut marks not clear
2007	121	Fragment 1: <i>Corylus</i> (20 × 13 × 10 mm) roundwood, no cut marks Fragment 2: <i>Corylus</i> (30 × 20 × 5 mm) small fragment, no cut marks Fragment 3: <i>Corylus</i> (10 × 20 × 5 mm) small fragment, no cut marks Fragment 4: <i>Corylus</i> (15 × 10 × 3 mm) small fragment, no cut marks
2007	177	Fragment 1: <i>Quercus</i> (95 × 40 × 5 mm) thin 'plank' of wood with diagonal cut mark at one end

some form of wattle structure may have been present, with oak stakes and possibly hazel poles providing the uprights with hazel and possibly split willow woven between them. A fragment of hazel wood (SF 121) provided a calibrated AMS radiocarbon date of AD 661–773 (SUERC-41590).

The uncarbonised seeds recovered from the bulk samples are generally indicative of rough pasture habitats, with little evidence for species that would favour very marshy or waterlogged conditions. The abundance of nettle seeds suggests nitrogen and phosphate enrichment that might be linked with the presence of cattle or sheep in the area or with midden or latrine deposits nearby. The only indicators of standing water having been present were occasional caddis fly larva cases. The aquatic larvae of some caddis flies construct cases from silk and tiny fragments of sand and gravel for protection. They only occur in aquatic habitats, usually in water that is unpolluted, but the habitat can be very ephemeral and so these finds do not necessarily indicate permanent standing water.

There were a few traces of possible food plant remains in the waterlogged deposits. Hazel nutshell fragments were present in all four bulk samples analysed, although these may only represent a few nuts in total. In addition, there were traces of raspberry and bramble seeds and a single seed of cultivated flax. None of these species is present in sufficient quantities to suggest that they represent dumped food plant remains or sewage and they may simply derive from naturally growing plants in the area. If sewage had been present then it might be expected that traces of bran or other cereal remains would have been identified.

There is little indication in the seed assemblage to suggest what this rock-cut basin was originally used for, although the wood does suggest some form of structure or fence was present. A few fragments of charcoal were also identified, with hazel and oak both represented. However, the quantities involved were very small and may represent charcoal fragments blown in from elsewhere. A single fragment of carbonised seaweed was also present and this may be related to the seaweed found in one of the backfill deposits (4014) in Trench 4.

EASTERN SIDE OF SUMMIT

Trench 4 was located on the eastern side of the central summit of Trusty's Hill (see Fig. 2.1). The results are shown in Table 5.12. The natural subsoil (4019) produced traces of hazel and oak charcoal, suggesting that there may have been some occupation on the site prior to the construction of the earliest features that were visible during excavation. The earliest stratigraphic features within Trench 4 comprised two discrete occupation deposits (4008 & 4020) overlying the natural subsoil (4019) located along the western edge of Trench 4 (see Fig. 2.5). These contexts contained very similar carbonised assemblages, with small amounts of charcoal of hazel, ash and oak, together with traces of hazel nutshell. In addition, the southern deposit (4008) also contained traces

of carbonised barley grain. Again, this seems like material derived from the burning of structural material but with some food waste mixed in. A fragment of hazel charcoal from this same deposit (4008) provided a calibrated AMS radiocarbon date of AD 411–543 (SUERC-41596).

Cutting the natural subsoil (4019) and greywacke bedrock (4022) within Trench 4 was an irregular rock-cut linear trench or shelf [4021] partially exposed within the centre of the trench. The rock cut trench [4021] was overlain by a construction layer (4016) underlying the rampart (see Fig. 2.6). The carbonised remains from this layer (4016) included small amounts of hazel, ash and oak charcoal, together with traces of cereal grain and hazel nutshell. Although the charcoal might suggest structural remains, the cereals and nutshell indicate that hearth waste or midden material might also be present. A fragment of hazel charcoal from this same deposit (4016) provided a calibrated AMS radiocarbon date of AD 529–623 (SUERC-41597).

The rubble core of the rampart (4004) produced significant amounts of charcoal, with oak dominating but ash, hazel and willow also present. This might suggest that there was a timber framework within the rampart, which was destroyed by fire when the rampart was vitrified.

Overlying the east of deposit (4020) was the collapsed interior face of the rampart (4018) that was overlain by dark soil (4007). This deposit (4007) was rich in artefacts, particularly ones linked to metalworking, whilst the charcoal assemblage was dominated by large amounts of hazel and oak, but with significant amounts of ash charcoal also present. In addition this context contained minor amounts of alder, birch and willow charcoal, a small cereal grain assemblage of barley and oats and some hazel nutshell. Again, the charcoal assemblage was very similar to that seen elsewhere on this site, with hazel, oak and ash suggesting structural remains. However, the metalworking debris could suggest that some of this charcoal might be the remains of fuel from a furnace or forge. A fragment of hazel charcoal from the dark soil (4007) provided a calibrated AMS radiocarbon date of AD 536–646 (SUERC-41592).

West of deposit (4007) was another dark soil deposit (4011) that also contained large quantities of oak charcoal, together with smaller amounts of hazel, alder, ash, cherry type and birch. There were also traces of yew charcoal, the only incidence of this tree type on the site. A few grains of barley and fragments of hazel nutshell were also identified from this context. The dominance of oak is usually an indication of structural debris but the presence of metalworking evidence in this deposit too could indicate that this is the remains of furnace fuel. The presence of yew charcoal is interesting but since only two fragments were recorded it may not represent

deliberate burning of yew wood but just be the result of accidental incorporation of small pieces of wood as kindling. Cut through the central part of this deposit (4011) were two features containing concentrated charcoal-rich soil (4012) and (4013; see Fig. 2.9). Context (4012) contained only a small amount of oak charcoal and nothing else, but deposit (4013) produced large quantities of oak charcoal with hazel and traces of ash also present.

Overlying deposit (4011) was a spread of stone slabs (4005). The matrix between these slabs produced a charcoal assemblage that included oak, cherry type, hazel and alder, and was similar in composition to the underlying deposit (4011), perhaps incorporating some of that context. The spread of slabs (4005) was, in turn, overlain by backfilled rampart collapse (4003) which was in turn overlain by another backfill deposit (4002) of Charles Thomas' excavation. This backfill deposit (4002) also contained a large amount of charcoal but with only oak and hazel represented. A fragment of hazel charcoal from this deposit (4002) provided a calibrated AMS radiocarbon date of AD 551–646 (SUERC-41591).

Along the eastern edge of Trench 4, to the exterior of the rampart (4004), was the collapsed exterior face of the rampart (4010) which did not show evidence of burning. Within the collapsed rampart face (4010) was a backfill deposit (4014) that had a very large amount of oak charcoal, and only traces of hazel and cherry type charcoal also present. In addition traces of barley grain and hazel nutshell were also identified. The dominance of oak charcoal might suggest that it derived from oak timbers. However, the additional presence of cereals and nutshell suggests that a component of midden material might also be present. Although the large stone slabs of the collapsed rampart face (4010) showed no signs of burning themselves, the matrix between these stones contained large quantities of charcoal. This charcoal assemblage was very similar to that seen within the lens of charcoal-rich soil (4014), with very large quantities of oak, lesser quantities of alder, hazel and cherry type, together with traces of cereal and bone. Again, this could be the remains of a burnt oak timber structure, with the addition of some midden material.

Overlying collapsed rampart face (4010) at the south-east corner of Trench 4 was a backfill deposit (4009) that produced only oak and hazel charcoal, again indicating that burnt structural material was present at this location.

WESTERN SIDE OF SUMMIT

Trench 5 was located on the western side of the central summit of Trusty's Hill. One of the earliest features in Trench 5 was a rock-cut shelf [5024] that was cut into the natural subsoil (5020). The subsoil produced charcoal of hazel, ash and oak, suggesting that the

Table 5.12 Carbonised remains from Trench 4

[illegible]

remains of burnt structural material had become incorporated into this subsoil (Table 5.13). The rock-cut shelf [5024] was filled with a construction layer (5017) that contained large amounts of hazel and oak charcoal, with lesser but still significant amounts of ash charcoal also present. In addition there were traces of alder, birch and willow charcoal, together with a few barley grains and fragments of hazel nutshell. As with the contexts examined from Trench 4, this charcoal assemblage seemed to contain a high proportion of structural material. A fragment of hazel charcoal from this deposit (5017) provided a calibrated AMS radiocarbon date of 513–378 BC (SUERC-41599).

The construction layer (5017) was cut by the base of a sub-circular post-hole [5021], with a fill (5022) that contained only slight traces of alder, hazel and oak charcoal, together with a few fragments of hazel nutshell, providing little evidence for this being the remains of a post burnt *in situ*. A fragment of alder charcoal from (5022) provided a calibrated AMS radiocarbon date of 515–381 BC (SUERC-41601), which suggests this charcoal originated from the same residual earlier Iron Age occupation as that contained in the underlying construction layer (5017).

Post-hole [5021] was largely covered by the rubble and matrix of the rampart core. The rampart matrix (5005) produced only small amounts of oak, ash, hazel and alder charcoal but not in sufficient quantities to provide evidence for a timber component to this section of the rampart. Within the rampart core (5005) was a concentration of vitrified stones with dark brown silty sand (5018). This matrix (5018) contained mainly oak charcoal with a small amount of alder and hazel. This can be taken as more definitive evidence of structural material within the rampart that had been burnt, presumably as part of the vitrification process. A fragment of hazel charcoal from this lens (5018) provided a calibrated AMS radiocarbon date of AD 536–646 (SUERC-41600). The top lens (5002) of the rubble core (5005) was made up from large stones of greywacke that showed further signs of burning and vitrification. The charcoal assemblage from this lens (5002) was identical to that recorded from (5018) and so is thought to have originated from the same structural material.

To the east of the rock-cut shelf [5024] and the rampart core (5005/5018/5002/5012) was a further rock-cut sub-circular feature [5023], which was filled with a clay silt, gravel and packing stones (5009). However, the carbonised assemblage from this post-hole fill (5009) contained only traces of alder and oak charcoal and so nothing definitive can be said about what this feature may have been used for.

Lying in the area between the rock-cut feature [5023] and the rampart core (5005), and overlying deposit (5017), was the collapsed interior face of the

rampart with a dark brown silty matrix (5010/5011). Although this matrix material produced bone and slag, the charcoal assemblage was dominated by oak and hazel charcoal with only a small amount of cherry type also present. This suggests that a substantial proportion of the charcoal came from structural material rather than simply being the remains of hearth waste, although it does appear that some midden material may also have been present.

A layer of charcoal-rich dark soil (5014) overlay the collapsed rampart face (5010/5011). This layer (5014) was thought to represent occupation material but again was dominated by oak and hazel charcoal, with only traces of alder and birch also present. A single possible oat grain was the only other carbonised find from this context. A fragment of hazel charcoal from this deposit (5014) provided a calibrated AMS radiocarbon date of AD 533–643 (SUERC-41598).

The charcoal-rich layer (5014) was sealed by rampart collapse (5007), which showed evidence of burning and vitrification. Once again, the charcoal assemblage was entirely made up by fragments of hazel and oak charcoal, although in this case the hazel was by far the dominant type present.

Discussion

The most notable finding from the analysis of the carbonised material from both Trenches 4 and 5, on the eastern and western sides of the summit respectively, was how remarkably similar the assemblages were from many of the contexts. Oak and hazel charcoal were by far the commonest types present, with ash also forming a significant part of the assemblages. Generally, this suite of charcoal types points towards the remains of structural timbers and wattle that have been destroyed by fire. It was also notable that much of this carbonised material was found in association with the vitrified ramparts and so it provides further evidence for the ramparts having a wooden, perhaps wattle, internal sub-structure when they were constructed. This wooden sub-structure would then have contributed some of the fuel that eventually allowed the vitrification of the ramparts to take place. There were often small quantities of other charcoal and midden-type waste within these rampart contexts and these may either be the remains of midden material that became incorporated into the deposits at a later stage or could be from additional packing material placed within the rampart.

The charcoal types that would normally be more associated with hearths and domestic cooking fires, such as birch and alder, were less commonly found within these assemblages. However, there is a possibility that some of the oak charcoal might indicate the presence of fuel from metalworking furnaces or forges, since oak charcoal can produce

Table 5.13 Carbonised remains from Trench 5

	Context		Description	5005	5007	5009	5010	5011	5014	5017	5018	5020	5022
	Sample/Find	002, SF044		044	SF 028	004	SF 040	SF 056	008, SF031, SF047	012, 016, 026, 028, 029, SF049, SF147	015, 021	SF 184	043, SF166
		Vitrified rampart core		Vitrified rampart core	Rampart collapse	Fill of post-hole 5023	Collapsed interior rampart face (same as 5011)	Collapsed interior rampart face (same as 5010)	Dark soil layer	Construction layer	Vitrified rampart core	Natural subsoil	Fill of post-hole 5023 within vitrified rampart
<i>Modern roots/stems</i>		+++		+	—	—	—	—	—	++	+	—	—
Vol. charcoal 2–4 mm		5ml		5ml	—	<2.5ml	—	5ml	10ml	80ml	5ml	—	<2.5ml
Vol. charcoal >4 mm		25ml		5ml	25ml	<2.5ml	5ml	100ml	60ml	105ml	15ml	10ml	2.5ml
<i>Charcoal</i>													
<i>Alnus</i>	alder	2 (0.15g)		1 (0.07g)	—	1 (0.04g)	—	—	6 (0.17g)	1 (0.01g)	12 (0.55g)	—	2 (0.16g)
<i>Betula</i>	birch	—		—	—	—	—	—	6 (0.26g)	2 (0.04g)	—	—	—
<i>Corylus</i>	hazel	6 (0.74g)		3 (0.13g)	6 (5.82g)	—	5 (0.78g)	37 (11.87g)	33 (7.26g)	150 (11.23g)	2 (0.07g)	3 (0.53g)	1 (0.01g)
<i>Fraxinus</i>	ash	—		3 (0.16g)	—	—	—	—	—	32 (1.91g)	—	1 (0.44g)	—
<i>Prunioideae</i>	cherry type	—		—	—	—	—	2 (0.33g)	—	—	—	—	—
<i>Quercus</i>	oak	44 (5.47g)		8 (0.30g)	3 (0.21g)	1 (0.05g)	—	44 (14.21g)	67 (9.92g)	146 (14.04g)	20 (1.69g)	1 (0.25g)	1 (0.03g)
<i>Salix</i>	willow	—		—	—	—	—	—	—	4 (0.33g)	—	—	—
<i>Carbonised cereals</i>													
cf <i>Avena</i>	cf oats	—		—	—	—	—	—	1	—	—	—	—
cf <i>Hordeum vulgare</i> sl	cf 6-row barley	—		—	—	—	—	—	—	3	—	—	—
<i>Carbonised seeds</i>													
<i>Corylus avellana</i>	hazel nutshell frags	—		1 (0.01g)	—	—	—	—	—	10 (0.15g)	2 (0.06g)	—	3 (0.06g)
Misc													
Bone		—		—	—	—	—	1 (0.39g)	—	—	—	—	—

the high temperatures needed for this type of work (Gale & Cutler 2000).

There was very little evidence for food plant remains in the contexts examined. Although cereal grain and hazel nutshell were present in many contexts, they tended to be only in trace amounts and so it is difficult to determine whether they were residual from earlier phases of occupation or represent a general scatter of midden or hearth waste across the site that had been mixed with the burnt structural debris.

The cereal assemblage, although not present in significant numbers, was dominated by barley, with traces of oats also present, but there was no evidence for wheat at Trusty's Hill. High status sites such as Edinburgh Castle tend to have wheat as a component of the cereal assemblage (Boardman & Ramsay 1997, 191–9). Wheat does not grow well in much of Scotland and so wheat grains on a site of this age may often be indicative of a traded commodity rather than a locally grown cereal (Dickson & Dickson 2000) and hence often suggest a site of higher status. Dunadd had slight traces of wheat recorded, though only in Iron Age contexts, but barley was the main cereal type present there (Milles 2000, 221–6) as at Trusty's Hill. The quantities of cereal recovered at both Edinburgh Castle and Dunadd were far greater than were recovered from Trusty's Hill. This may be because cereal processing was not being undertaken on site at Trusty's Hill, or that there was less intensive domestic occupation. It might even suggest that Trusty's Hill was only occupied intermittently and so general domestic midden material and hearth waste did not build up on site. However, as only a very small percentage (1.3%) of the site was excavated, the lack of domestic occupation debris may simply be due to the appropriate areas remaining unexcavated.

The only other carbonised remains of food plants recovered at Trusty's Hill were fragments of hazel nutshell, but again these were only small amounts and provide little evidence for hazelnuts forming a significant part of the diet.

More unusual finds from the site were small quantities of carbonised seaweed. Traces of seaweed were recorded at Edinburgh Castle, but in the Iron Age deposits (Boardman & Ramsay 1997, 191–9), and also in the carbonised assemblages from Dunadd, especially the early medieval contexts (Milles 2000, 225). It is not clear what purpose the seaweed was used for. However, seaweed does contain high concentrations of mineral salts and so can be burned to produce fertiliser. However, it may also have some use in industrial processes, as in later centuries it was used in the production of lye, glass and soap (Dickson & Dickson 2000).

The presence of a small quantity of yew charcoal within one of the dark soil deposits (4011) on the eastern side of the summit is an unusual find as yew is a rare occurrence within carbonised assemblages from Scotland. Although only two fragments of yew charcoal were identified, it is possible that this is an indicator that yew wood was being used on the site. The most commonly known use for yew wood is for the manufacture of bows but it is also associated with death, mourning and ritual as evidenced by the presence of yew trees in graveyards (Gale & Cutler 2000). It is possible that many of these yew trees are older than the graveyards and may actually be the reason for their location. However, there is also evidence that yew wood was preferred for the manufacture of buckets and mugs, possibly because it is resistant to decay even in damp conditions (Bevan-Jones 2002). Unfortunately it is impossible to determine whether the yew charcoal at Trusty's Hill is of any special significance since the quantities involved were so small.

The waterlogged primary fill deposit (2007) of the rock-cut basin in Trench 2 is difficult to interpret. The wood remains seem to indicate that a wooden structure, made from oak, ash, hazel and willow, may have been demolished and dumped into the rock-cut basin here. Cut marks on many of the wood fragments may provide additional evidence for the tools used either to build or demolish this structure. For an area that apparently held water, though, there is little evidence for this in the uncarbonised seeds that were recovered. This might indicate that it was kept clear of vegetation when in use and so natural silting and growth of aquatic plants was prevented. However, there is also the possibility that many of these seeds may not be contemporaneous with the use of the site. As the area was excavated in the 1960s, and the basal levels were described as being like 'soupy mud', there is a concern that some of the seeds recovered from the basal deposits may be later contaminants and may explain why the seed assemblage is generally indicative of rough pasture. However, there is no suggestion that all the seeds are 'modern' but it is impossible to tell visually whether many of the seeds are just very well preserved or are later incorporations.

Many of the botanical remains from Trusty's Hill are strongly indicative of structural remains, but provide little evidence for domestic occupation on the site, either in terms of domestic hearth waste or remains of food plants. This suggests that the main areas of occupation within the site are still to be excavated.

The rock carvings

Katherine Forsyth & Cynthia Thickpenny

Introduction

A series of carvings appears on a natural outcrop of greywacke to the left of the entrance to the summit citadel of the fort on Trusty's Hill (see Fig. 2.1). The outcrop faces east-north-east and presents a 'natural slab' (Stuart 1856, 31) that slopes at about 45° (Allen & Anderson 1903, ii, 478; see Fig. 2.23). The exposed

surface is divided vertically by a natural fissure, giving it something of the appearance of an open book. The left hand 'page' is fairly smooth throughout its entire length but the lower part of the right hand 'page' is disrupted by a series of natural breaks and fissures (Fig. 6.1). The upper area of the face is dominated by two large images (whose maximum

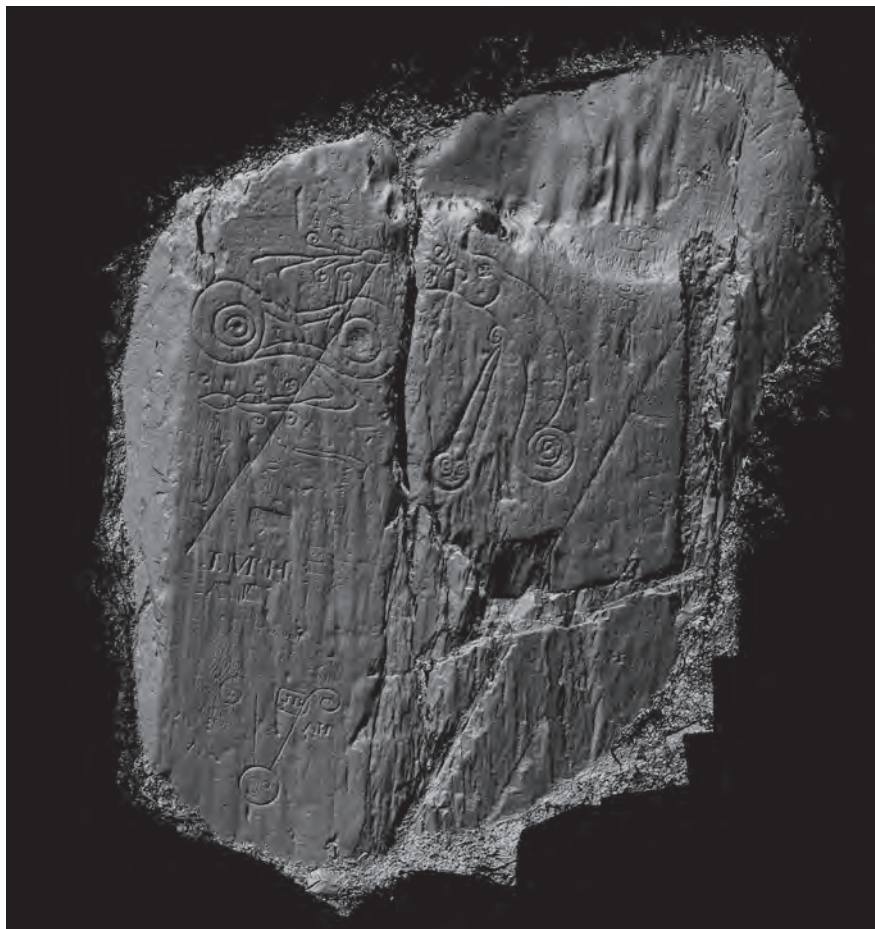


Fig. 6.1. 2012 Laser scan survey of rock carvings at Trusty's Hill. © DGNHAS/CDDV

dimensions are height 0.61 m, width 1.08 m) – the so-called ‘Pictish symbols’ – but across much of its entirety it is peppered with a jumbled mass of letters, dates and doodles. In general these are much less substantial than the ‘symbols’ and are clearly nineteenth century graffiti, apparently the initials of sightseers (only a selection of the more substantial of these carvings are depicted on John Borland’s drawing (Fig. 1.12)). In addition to the various pits, gouges and scratches in the surface (the majority of which appear to be natural), there are two long, straight, parallel, oblique lines running across the entire rock-face, from bottom-left to top-right. These, and other less distinct parallel lines to the lower right, are joint planes of geological origin and not the result of human action.

Disregarding the graffiti, the exposed surface is carved in three areas: A = upper left, B = upper right, C = lower left. The images in areas A (a degenerate ‘double-disc-and-Z-rod symbol’) and B (a dragonesque beast pierced by a pointed object) are similarly carved and have a similar iconographic approach. These motifs are presented confronting each other and seem to interact and comment on each other. Clearly they are structurally a unit, despite the intervening cleavage down the stone (which may have widened in the last millennium). The image in area C, however, is carved differently from A and B and embraces different motifs. It appears to consist of secondary graffiti – perhaps derivative of the carving in A and B – cut in the eighteenth or early nineteenth century. Marks on the left edge (‘arris’) of the exposed block- area D – have been proposed as a possible ogham inscription (Fraser 2008, 64–5). For reasons set out below, this interpretation is not supported.

Antiquity of the carving in areas A and B

The image occupying the full width of the left-hand ‘page’ is immediately recognisable as a ‘double-disc and Z-rod’ symbol of the type commonly found on Pictish symbol stones (Fig 6.1). With more than 60 extant examples, the ‘double-disc and Z-rod’ is second only to the ‘crescent and V-rod’ symbol in its frequency (Mack 1997, 6–7). The Trusty’s Hill symbol thus has many comparanda, but immediately it stands out as a little odd. To the right, at a similar scale, is a unique figure which has also been interpreted as a Pictish symbol, though this is more problematic. It takes the form of a monstrous hybrid: a powerfully jawed creature with mammalian snout and coiled serpentine tail. Although kindred creatures are known from sculpture elsewhere in Scotland, the precise form is unusual, and – uniquely – it appears to be impaled on a point or blade of some sort. The oddness of the Trusty’s Hill designs, especially in the

context of the probably modern horned head below, has led some to be sceptical of their authenticity. Anthony Jackson included Trusty’s Hill among his list of ‘dubious monuments’ (1984, 37, table 2b), but as the list includes a number of unquestionably early medieval stones, such as the Burghead bulls, his doubt appears to be not over their antiquity but rather over their status as symbol stones. (Note: images of, and references to, these and all Pictish stones mentioned are to be found, under the name given, in Fraser 2008). Oram, however, was more explicitly doubtful of the age of the carvings when he suggested that ‘the possibility that we are dealing with relatively modern forgeries should not be dismissed out of hand’ (1993, 15). Cowan too suspected the hand of an antiquarian prankster (1991, 74, n.53). It is as well to address this possibility square-on at the outset.

Despite the doubts of previous scholars, there appears to be no physical impediment to the symbols being ancient: they do not appear to overlay any of the obviously modern carving elsewhere on the slab. A modern initial ‘J’ has been carved on the cross-bar of the double-disc but it does not impinge on any of its lines. Neither is the incision technique employed obviously modern, though detailed analysis of the laser scan might throw objective light on this (Kitzler-Åhfeldt 2012). The Trusty’s Hill carvings were first illustrated by Stuart in 1856 (see Fig. 1.4) but, as Lloyd Laing has observed (2000, 10), they must pre-date Stuart’s drawing by some duration for him to have considered them genuine. In fact the carvings had first been noted in print more than 60 years previously when the parish minister, Hugh Gordon, mentioned them in his notes on the antiquities of the parish of Anwoth for the *First Statistical Account* (1794, 351). If the carvings were already thought ancient then, this would project any forgery back to a period when interest in and knowledge of Pictish symbols was virtually non-existent. It is telling that the design of the carving was so unfamiliar and alien to late eighteenth century visual sensibility that not even the monster could be ‘read’ as anything but an abstract design. There is no recognition that there was anything ‘Pictish’ about them. Not until 1855 was the link with the symbols stones first recognised (Muir 1855, 33).

The earliest published reproductions of Pictish sculpture are those of Alexander Gordon in his *Itinerarium Septentrionale* of 1726 (Ritchie 1997). Although primarily interested in Roman remains, Gordon included drawings of later sculptures which he believed to be ‘Danish’, i.e. Viking (Fraser 2008, 3). Double-disc and Z-rod symbols appear on his illustrations of the Class I stone from Edderton and of the Class I and II stones from Aberlemno, which, significantly he labels: ‘Obelisks with Egyptian symbols’, reflecting the fact that it would be some



Fig. 6.2. Incised horned head in area C of exposed rock surface. © DGNHAS/CDDV

years before the symbols were definitively linked to the Picts. In addition, while Gordon clearly conveyed basic symbol outlines and an idea of floriated rods, he failed to reproduce secondary, but equally crucial details such as the internal decoration of discs or connecting bars, or the articulation and corner decoration of Z-rods. He was no more successful in his reconstruction of interlace or other relief-carved Insular motifs. On the basis of these published drawings, no-one setting out to simulate a Pictish symbol in eighteenth century Kirkcudbrightshire could have done so with the level of accuracy displayed at Trusty's Hill on the basis of then published drawings. Further publications by Thomas Pennant in 1774 and Charles Cordiner in 1780 and 1788–95 brought Pictish sculpture to a wider audience (Fraser 2008, 3) but still their illustrations were little more accurate than Gordon's. Significantly, their appearance is too late to have inspired carvings which were already thought ancient by 1794.

The form of the Trusty's Hill symbol pair is unusual but firmly within the broader tradition of Pictish carving. It is not a copy of a specific

example but a convincing blend of diverse elements, which is another factor that counts against it being an antiquarian construction. It reflects detailed knowledge and understanding of a tradition that could not have been acquired without extensive first-hand observation of a wide range of Pictish examples, something which is inconceivable before Stuart's publications in the 1850s and '60s, as his were the first volumes to approach a comprehensive and systematic catalogue of Pictish carvings. Taken together then, the early date of the published references to the Trusty's Hill carvings and, above all, the authentic detail of the design mean that we can be confident of their early medieval date (*c.f.* Craig 1992, i 197). If they are somewhat odd, it is not because they are modern.

Carving in Area C

Towards the bottom edge of the exposed face, near a cartouche containing the initials JB, is a third incised figure which consists of a firmly incised circle enclosing a group of less substantial carvings which together resemble a human face (Fig. 6.2).

The two eyes are circles, between them are the two parallel lines of a nose ending in a blunt horizontal line, and adjoining that – below and a little to the left – the mouth is a short horizontal rectangle. The final element of this composition is a pair of long, diverging, antennae-like lines emitting from the top of the head, each curving outwards and terminating in a tight spiral. The form of this figure, especially the circularity of the head and eyes, is hard to parallel in early medieval Insular art. Allen and Anderson illustrated and described it without demur, implying they accepted it as early medieval (1903, 478–9) but Stuart had already suggested that it was of more recent date (1856, 31). Radford was of the opinion that ‘the form is old’ though it had been ‘retouched in recent years’ implying he thought the carving technique modern (1953, 237 n.2), which Cessford concurred with (1994, 85). Physical evidence for ‘retouching’, in the sense of re-carving and reinforcing an existing line, is, however, hard to see. Close examination of the incised lines shows them to be unlike those of the symbols in the upper area and closer to much of the graffiti. They may well be of similar date. While it was not possible to confirm conclusively that the right-hand antennae over-lies the frame of the cartouche containing the initials ‘JB’, the relative layout of the two implies that the latter was there first and thus the ‘antennae’ are indeed modern. Similarly a less deeply incised cartouche containing an ‘M’ and other characters apparently underlies the left antennae-spiral. As noted above, the outline circle of the head is more substantially carved than the other elements, raising the possibility that it might indeed be older and was augmented in the late eighteenth or early nineteenth century with the antennae and facial features, to turn it into a jokey face. Perhaps this is what Radford meant by retouching. Such an act (or indeed the carving of the entire figure in a single go) may have been inspired by a reading of the ‘spike’ or ‘blade’ image associated with the monster higher up on the slab, as suggested by Craig who also believed the lower carving to be recent (1992, i 197; ii 355). The spike too has a sub-circular outline; internal decoration which could be interpreted as two staring eyes, a nose and a mouth; and, protruding from the top, two long lines (though here converging rather than diverging) which end in two tight spirals (Fig. 6.1). On balance the lower figure is, in its current form, unlikely to be early medieval in date and should be considered separately from the ‘symbols’ above.

Carving in Area D

A number of short straight lines in the vicinity of the left-hand arris of the outcrop were previously recorded in a drawing (see Fig. 1.12) which was based

on a rubbing (John Borland, *pers. comm.*). It has been tentatively suggested that these might constitute the remains of a now illegible ogham inscription (Fraser 2008, 64). Although ogham inscriptions on rock faces are rare (e.g. Dunadd, Argyll (Forsyth 2000); Listowel and Camp, Co. Kerry (Okasha & Forsyth 1997, 357–60)), the use of an arris for the stem-line is typical on early ogham pillars, with the letter strokes falling to either side on the adjacent faces, so such an arrangement is not implausible. Close examination of the rock surface, however, confirms that the marks are of geological origin, the result of horizontal stress fractures in the rock (Ewan Campbell, *pers. comm.*). Although only the fractures at the arris have been highlighted in the drawing, in fact horizontal fractures of this kind spread all over the surface of the slab (see Fig. 2.21). The few non-oblique strokes shown on the drawing do not appear to be anthropogenic.

Analysis of image A: ‘double-disc and Z-rod’

In order to understand both the congruence of the Trusty’s Hill double-disc to the generality of Pictish examples and its deviation from the norm it is necessary to look in some detail at other examples of this symbol. It appears to comprise three elements: matched pair of discs, connecting bar between them, and floriated rod lying athwart the bar (Fig. 6.3). Each may be embellished in ways which appear to be purely decorative, but these three elements seem to be the essence of the symbol. In all but the simplest incised (‘Class I’) cases, discs are formed from two to three concentric rings, at the middle of which lies a small gouged dot. Sometimes these medial dots are indeed strictly central, sometimes they are off-set and lie closer to the connecting bar. When discs are formed of *two* concentric rings and a dot, the width of the rings is typically equal (as on Dyce 1 or Tullich), although occasionally the innermost ring is narrower than the outer ring (as on the Picardy Stone). When, however, discs are formed from *three* concentric rings, either the rings are of roughly equal width (e.g. Keith Hall, Congash 2 and Invereen) or, more usually, the outermost ring is to some degree narrower than the others and forms a rim around the edge of the disc (e.g. Inverurie 3, Clach Ard or Kintore 2). In almost all cases of triple rings, the third (innermost) ring wraps tightly around the central dot. Relief-carved symbols on cross-slabs (‘Class II’) are typically embellished with a range of geometric ornament, often spiralliform in the case of double-discs. Although the majority of Class I double-discs have no internal decoration beyond the rings and dots described above, and the majority of Class II double-discs have spiralliform or other internal embellishment, this is not a hard-and-



Fig. 6.3. Incised double-disc and z-rod, and dragonesque beast and blade symbols in areas A and B of exposed rock surface. © DGNHAS/CDDV

fast rule. There are a number of Class II double-discs which are relatively plain – triple ring, dot-and ring – even when carved in low relief (e.g. Golspie, Monifieth 1, Woodwrae, Meigle 6 and St Vigean's 5) which appears to confirm this as the essential form of the symbol, regardless of how elaborately it is realised.

The discs on Trusty's Hill (Fig. 6.3) are each formed of three concentric circles and a central dot, and yet they do not follow either of the two patterns outlined above for discs of this type. In contrast to Pictish Class I models, the outer 'rim' is wider in comparison with the circles within it, an impression exacerbated by the fact that the central indentation is much wider than most Pictish exemplars, which typically have small dots instead. The scale of the central cup thus disturbs the symmetry of all the rings that encircle it, making the rims around the Trusty's Hill discs look disproportionate. The closest Class I parallel occurs on Tillytarmont 2, but even here differences are instructive. The centre of each disc (here a circle rather than a dot) is, in fact, offset inwards (*i.e.* towards the bar) which means that the two outer rings vary in width – they are widest where they are furthest from the bar, and narrow towards it. The line which separates them is, however, carefully equidistant

from the outer perimeter and the innermost circle, balancing the tapering width throughout. The result is a harmonious composition which contrasts with the less controlled lines of Trusty's Hill. The lack of control on the latter is manifest in the wavering of the line, especially on the left disc (which is not strictly circular), and by the fact that the two discs are not perfectly matched: the centre of the left-hand disc is more off-set than the one on the right, giving a slightly unbalanced impression, and the contrast in width between the middle and outer rings of the left disc is greater than on the right. The cock-eyed impression is exacerbated because, as is visible on the laser-scan (Fig. 6.3), the third (inner) ring of the right-hand disc has come away entirely and only the bottom of its central dot is now visible. It is not clear whether the carver deliberately removed the ring at the outset, whether it broke off during carving the inner dot, or has been worn away subsequently. Whether intended or not, this very large central cup upsets the proportions of the right-hand disc and causes imbalance between the halves of the design. To sum up, Pictish discs are commonly characterized by the roughly equal size of their internal rings, or by an outer ring that forms a narrow circular rim around

the disc, but the Trusty's Hill symbol shares neither of these attributes, giving it a more unbalanced appearance than is usual in Pictland. Although the form of this symbol is simple, subtle differences in the layout of the constituent elements make the difference between an elegant example and a more awkward version, suggesting the Trusty's Hill carver was unaware of these subtleties.

Turning to the second element, the central bar, the relative proportions of these vary considerably even within Class I, from the short and squat to the long and thin. Trusty's Hill falls comfortably within the normal range and is also typical in having concave sides. This impression is enhanced by the presence of the third characteristic standard to the double-disc symbol, namely an inner line along each side. In some cases these inner lines are strictly parallel with the top and bottom edges of the bar and terminate within the bar at the point where they meet the circumference of the disc (*e.g.* Fyvie 2, Newton House 2, Congash 2). More commonly they tend to start and end at the outer line then curve in towards each other in the middle, sometimes to the extent that they actually touch: the result is two crescents, back to back. Inner-lines which converge in this way often have their ends neatly tucked into the outer corners of the bar where it meets the perimeter of the discs, thus inner lines merge with the disc perimeter in a single continuous line of curve and counter-curve (*e.g.* Dyce 1). Trusty's Hill is an example of the former type, with inner lines roughly parallel with the outline of the bar, curving towards each other scarcely, if at all, and terminating within the bar where they meet the circumference of the disc. Further analysis of the range of double-disc and Z-rod symbols is required before the significance of these variations is understood. Is it a question of date? Or a regional trend? Whatever it is, the Trusty's Hill carver demonstrates familiarity with even minor details of the tradition.

A third element, the floriated rod, is the aspect of the Trusty's Hill symbol which is most divergent from Class I models. The basic Class I model comprises two parallel lines joined by an oblique cross-stroke to form a Σ -shape. Although usually labelled a 'Z-rod', this is in fact a misnomer. Allen and Anderson consistently described it as a ' Σ -shaped rod' (1903 *passim*) and this – or a term such as 'double-bent rod' (Goldberg 2012) or 'angular S-rod' – would be more accurate, if more cumbersome (or typographically challenging). The inner angles of each join are filled with a curved line, outlining a triangular crescent shape which itself is sometimes filled by a circle and/or dot and/or lentoid shape. Thus the angles recall a hinge or the bent fibres of split wood. There is considerable variation in the treatment of the two terminals of the rod, although Class I examples, especially early ones, maintain a clear distinction between the two ends

(Goldberg, Thickpenny & Forsyth in prep.). The lower terminal is typically broad and lyre-shaped with a central bud, somewhat like an arrow-head. The upper terminal is narrow with a lentoid or pear-shaped end like a spear-head. The upper section of the rod is often embellished with a sequence of S-curved lines arranged (typically three above and two below) either side of the rod, mirroring one another in shape but off-set relative to one another. This has been likened to the fletching of an arrow but if this is a spear-shaped terminal then the lines lie in the wrong direction, curving towards rather than away from the tip. To Henderson, however, this is the 'flaming end' and the tip lies at the opposite, 'arrow' end (Henderson 1960, 50). If the rod is meant for a broken arrow or spear as many, including Thomas (1963) have assumed, then the portrayal exhibits artistic licence rather than accurate detail.

While the above holds true for most Class I stones, and certainly for the earlier ones, these conventions underwent 'considerable breakdown' by the time of the Class II cross-slabs (Henderson 1960, 50). Most fundamentally, the basic orientation of the symbol was increasingly disregarded and some Class II stones have rods which bend in the opposite direction so that they are actually Z-shaped (*e.g.* St Vigean's 1, Meikle 7, Eassie). Trusty's Hill does not go that far, retaining the canonical orientation, but in several other respects it is aligned more closely with Class II rather than Class I examples or at the very least displays a lack of detailed knowledge of typical Class I conventions regarding rod floriations. The Trusty's Hill rod shares the 'typical Class II perversion' of having identical terminals and floriations on both upper and lower sections (Henderson 1960, 50, n.2). About a third of all Class I Z-rods on double-discs are plain, apart from their terminals (at least eight in total). The remainder of those sufficiently complete to tell (at least 16) have S-shaped embellishments on either side of the upper section of the rod only (Congash 2 as currently orientated has embellishments on the 'lower' section of its rod only but as this end has a lentoid terminal, which elsewhere is always otherwise the upper terminal on Class I, it is possible that in its current position the fragment is inverted relative to its original orientation; or that the carver of this stone, with its otherwise unique 'helmet and arrow' symbol has deliberately or accidentally inverted the double-disc symbol). Although some Class II Z-rods also have off-set embellishments (*e.g.* Brodie, Rosemarkie, Fordoun, Strathmartine 3), it is more common that they are paired on these later stones (*e.g.* Aberlemno 3, St Vigean's 1 & 5, Meikle 7, Monifieth 1). This is a key feature aligning the Trusty's Hill rod, and its paired embellishments, with the Class II style of symbol. More than this, however, the Trusty's Hill floriations are not of the usual elegant S-shaped form (*i.e.* in pairs

forming lyre-shapes) which swings outward from the rod before it curves back in toward the centre-line, where it finishes with a spiralling flourish. This feature of 'outward curving' is general to all Class I floriations on a variety of rods: the floriations on the V-shaped rods which typically accompany crescent symbols often curve inwards to form a C-shape but they still have a pronounced convex curve. Trusty's Hill lacks S- or C-curves entirely (except, perhaps, for the faintest hint on a single floration nearest the left-facing point of the rod). Instead its floriations consist of more-or-less straight lines protruding obliquely from the rod before they terminate with separate spiral flourishes, the centres of which are formed by drilled dots, at least on the outer spirals of the upper and lower parts (Fig. 6.3). The floriations on both sections of rod point towards the tip, in the opposite direction from all other Z-rod floriations with three exceptions: the Class I stones from Invereen and Tote in Skye and the late Class II slab Aberlemno 3. The Class I examples have off-set floriations on the upper section of rod only, but these point 'out' in contrast to all twenty of the other floriated Class I Z-rods on double-discs and the three on metalwork. Only Aberlemno 3 shares with Trusty's Hill the feature of having outward pointing floriations on both sections of rod (*i.e.* when floriations are present on both sections of rod the norm is for them to point in from both ends towards the middle of the rod: Aberlemno 3 and Trusty's Hill alone point out towards the two ends of the rod). In such matters of detail, the floriations on the Trusty's Hill rod are so unlike the rest of the corpus as to suggest a less than thorough familiarity with (or failure of memory regarding) the basic anatomy of the symbol and probably a direct model akin to Aberlemno 3.

Another obvious way in which Trusty's Hill is aligned with Class II is by having a broad rod represented in outline, rather than a slim rod formed from a single line (as is typical of Class I). The whole of the mid-section of the Trusty's Hill rod is represented in outline, as are its upper and lower portions beyond the bends, up to the points where they reach the floriations where they narrow to a single line. This hybrid linear/outline treatment of a rod is unique. Most Class I Z-rods are linear. Although there are a small number which are in outline these have further unusual features: the double-disc on Invereen is very fine and masterfully carved but is anomalous in the form of its floriations. Inverallan features an outline Z-rod over a notched-rectangle but the form of the latter - with its notches opposite one another rather than off-set suggests a late date within the Class I sequence (Henderson 1960, 52). Width is also represented on the Z-rod on Aberlemno 1 but somewhat differently from Inverallan and Invereen; the Aberlemno rod is a single incised line but one

which is unusually deep and thick, with the triangular recesses at the corners tapering far along the rod before merging with it. At the point where it crosses the joining bar, the Aberlemno rod is, however, essentially linear in the wider Class I tradition.

The inspiration for the outlined rod at Trusty's Hill is perhaps more likely to have come from Class II stones, which typically feature 3-dimensional relief-carved, and thus two-sided rods, (*e.g.* Aberlemno 3, Rosemarkie, Monifieth 2, Cossans, Dyce). The three-dimensionality of these Class II Z-rods appears to have encouraged carvers to depict them as interweaving with the rims of the connecting bar (*e.g.* St Vigean 1, Brodie, Elgin, Kirriemuir 2). In order to do this the connecting bar is re-conceived as two rounded horizontal strands with a void in between, rather than a solid, flat plate. Romilly Allen's depiction of the Trusty's Hill rod implies that it interweaves with the bar in the manner of these Class II examples (Allen & Anderson 1903 ii, 478; see Fig. 1.6). A close examination of the stone, however, shows this is only partially true (Fig. 6.3). At the point where the rod crosses the upper rim of the central bar only the vertical sides of the rod are shown, which gives the impression that here the rod lies on top of the bar. In order to give the impression that the rod passes under the lower rim of the bar it would have been necessary to depict only the horizontal lines of the bar at the corresponding point below, whereas, in fact, all four lines, horizontal and vertical, are depicted, negating the impression that the rod is a three-dimensional entity at all. The mismatch between the treatments at the upper and lower rims of the bar suggests the carver has blundered in carving two extra lines at the lower crossing (whether the intention was for the rod to appear to lie over or pass under the lower rim). The carver has also failed to maintain a uniform width for the rod as it passes over the undulating rock-face. This poor control of line has resulted in a rod which is lumpy and misshapen. The portions above and below the bar are wider than the middle section and the junctions are awkwardly handled, especially at the top. John Borland's drawing gives the impression that there is a break in the left-hand line of the rod (Fraser 2008, 65; see Fig. 1.12). The laser-scan, however, confirms that the left line is in fact continuous, and swoops to the side, piggy-backing on the horizontal upper line of the bar (Fig. 6.3).

The treatment of the angles of the rod is also clumsy. Triangular zones in the angles of Class I rods are typically filled with some form of lentoid or dotted embellishment, although a number of Class I examples do leave the area plain. Whether empty or filled, however, these zones are neat little triangles which bring balance to the composition - a far cry from the bloated, mis-matched boomerangs which form the angles of the Trusty's Hill Z-rod.

Given the analysis of the precise form of the Trusty's Hill double-disc and Z-rod symbol above, it is concluded that, while its carver was sufficiently familiar with Pictish symbol conventions to capture some 'canonical' details of the form, they were sufficiently distant from the tradition (geographically, chronologically or culturally) that other details were misconstrued or overlooked. The Trusty's Hill symbol has no direct 'partners' in Pictland which parallel its every stylistic component. Nonetheless, it displays a few artistic details or traits that are so basic and common to the Pictish corpus that they could be considered canonical to the form. These include the pinched central bar with curved seam lines, nested-circle disc decorations, and a Z-rod. All these features are attested on both Class I symbol stones and on the generally later symbol-inscribed cross-slabs (Class II). Some of the ways in which the Trusty's Hill symbol differs from the norm may be accounted for by the carver's lack of control over the carved line: the wavering circumferences on the left disc, the shaky and uneven rod which is far from straight, and the failure of the separate sections of the rod to join. Close attention is usually given to the circularity of discs on both Class I and II, and, although no formal analysis of this has been done, in many cases discs appear to have been laid out using compasses. This is far from the case at Trusty's Hill. Other differences from the norm are about design rather than carving technique: some, such as the lack of differentiation of rods, are attested elsewhere and may be taken as indicative of late date, *i.e.* contemporary with Class II, if anything towards the end of Class II (Henderson 1960, 50 n.2; Mack 1997, 137). Others appear to be idiosyncrasies unique to Trusty's Hill (large medial indentations on the discs; unusual form and inverted direction of the floriations). It is not simply a case of inferior execution of the incising, which might result from lack of familiarity with the carving qualities of the notably hard greywacke rock, but rather weaknesses of design which seem inconceivable from someone fully immersed in the tradition. The use of incised technique may give the Trusty's Hill double-disc the superficial air of a Class I symbol: closer examination, especially of its rod, makes it clear, however, that it was drawn by someone whose knowledge of the symbols was based on the devolved versions of Class II.

Analysis of image B: Monster

The overall impression gained from study of the left-hand symbol – of a carver aware of Pictish carving on the level of detail but not fully part of the mainstream Pictish tradition, and operating during or after the period of the erection of Class II cross-slabs – is further borne out by an examination of the figural

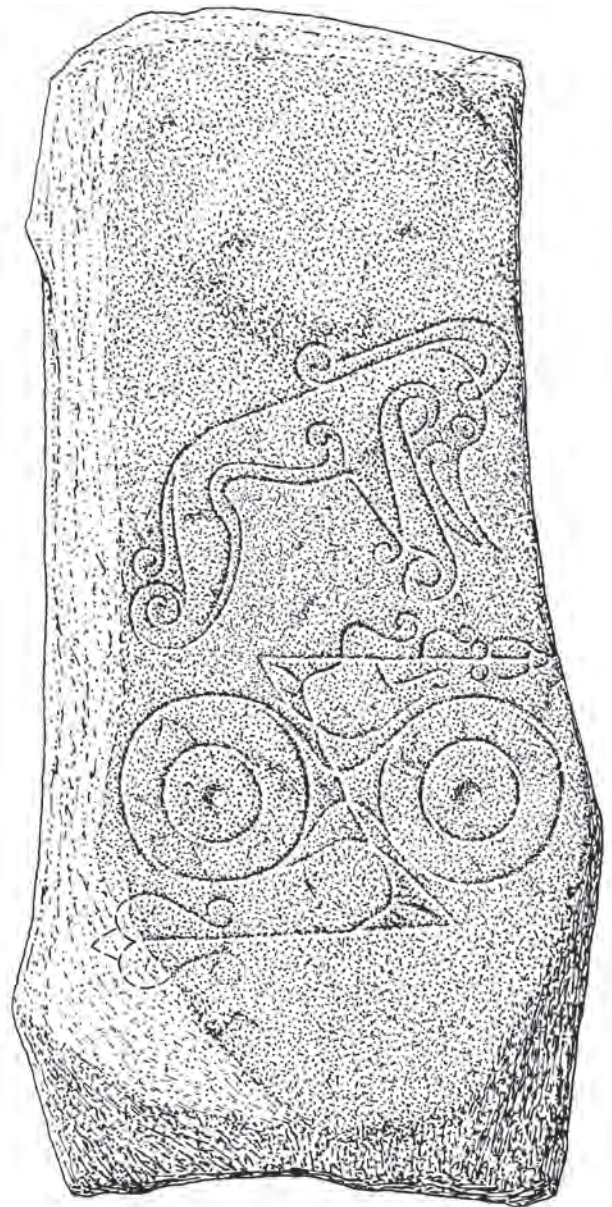


Fig. 6.4. Pictish beast as depicted on Dyce 1. © Crown Copyright: RCAHMS. Licensor www.rcahms.gov.uk

motif to the right in Area B (Fig. 6.3): a beast with a substantial snout and gaping jaws which appear to terminate in spirals. Its jaw-line is well-defined and curves up to terminate in a piercing eye. The muzzle is elaborate, although hard to read in detail in its current state of preservation. The serpentine body sweeps down to terminate in a tightly coiled tail. No internal decoration appears on the body below the jaw-line (as is clear from the laser scan *pace* Allen & Anderson 1903 ii, 478, fig. 508, *pace* Craig 1992, ii 354) but the outline of the body is interrupted in the neck or chest area by two small rounded protrusions which are defined internally by a simple, inward-turning spiral. If these portray vestigial flippers or fins they are rather small. Whatever this creature

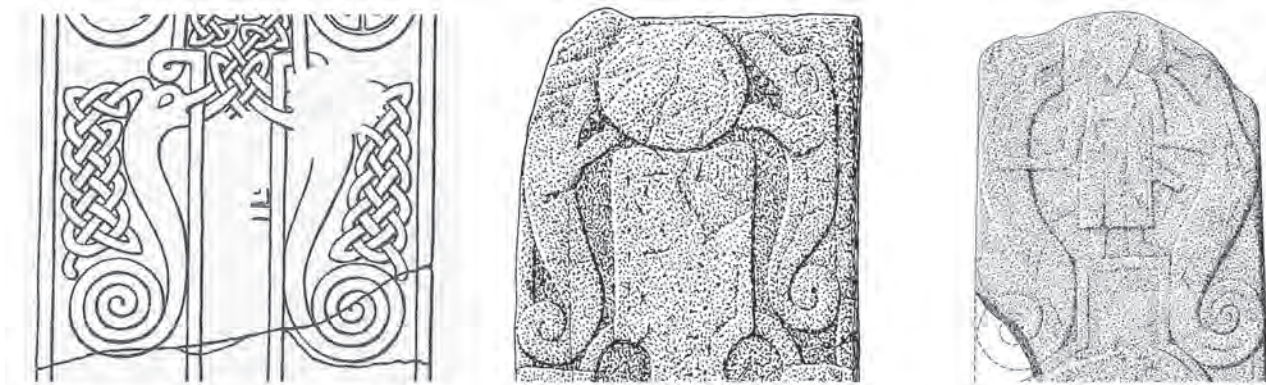


Fig. 6.5. Serpent-monsters in Pictish art (left to right) a. Skinnet, b. Logierait 2, c. the Maiden Stone; (a) we are grateful to the Society of Antiquaries of Scotland for permission to reproduce this illustration; (b-c) © Crown Copyright: RCAHMS. Licensor www.rcahms.gov.uk

depicts, it is not a 'Pictish beast' symbol of the kind so familiar from both Class I and Class II stones (Fig. 6.4). It lacks the necessary long, flipper-like front and rear limbs, the lappet, the long beaky face, and downward-hanging tail found in every iteration of this symbol. Instead, the Trusty's Hill monster belongs to a different species, morphologically more similar to the limbless, lappetless, tail-less 'fish-monster' (so-called) which appears on a number of Pictish stones, though whether this creature should be considered a 'proper' Pictish symbol is doubtful. There is only one alleged example of a 'fish-monster' on a 'Class I' Pictish symbol stone, that from Upper Manbeen, Moray (Allen & Anderson 1903, 128), but this interpretation is a misreading of two separate symbols (salmon and dog/wolf-head) which emerge from an area of damage where the surface has entirely flaked away (Fraser 2008, 114–5). Furthermore, the Upper Manbeen symbol is clearly salmon-shaped with a straight tail and ventral and dorsal fins. It is quite different from the coiled-tailed Trusty's Hill example and may be set aside from the present discussion.

Creatures which are far more similar to the Trusty's Hill animal appear on nine or ten 'Class II' symbol-inscribed cross-slabs (Aberlemno, Brodie, Kilduncan (Trench-Jellicoe 2005), Logierait 2, the Maiden Stone, Meigle No. 1, Mortlach, Skinnet, Ulbster and perhaps Tealing) and on a handful of non-symbol-bearing sculptures (Murthly, Meigle 8 and 26 (Allen & Anderson 1903), the St Ninian's Isle corner-post shrine (Ritchie & Scott 2009, 6, 21, no. 34), and a newly discovered cross-slab from Appiehouse, Sanday, Orkney (Gibson 2011). Usually depicted in confronted pairs, these creatures, which 'seem to have been regarded as benign' (Henderson 1996, 25), appear to guard or shield, or perhaps acknowledge (*ibid.*) what lies between them: Christ, a cross-shaft, a large disc, a triquetra knot, treasure (Fig. 6.5). The Aberlemno and Tealing monsters and some of those

on Meigle 1 have forelegs and fish-tails which identify them as marine horses or 'hippocamps' and these should perhaps be distinguished from the others which are limbless, coil-tailed serpent-monsters.

Despite the hippocamp's Classical origins as a symbol of the sea-god Poseidon, monsters of this form were, by the Early Christian period, familiar as representations of the *ketos* ('sea monster, whale') which swallowed the Biblical Jonah (Henderson & Henderson 2004, 142–3), as seen in the ninth-century Stuttgart Psalter. It is perhaps Jonah imagery which accounts for the appearance of hippocamp pairs grasping a human head or body which are incorporated into the frames of certain Pictish cross-slabs: the diagnostic fish-tails are visible on the confronted pairs at Cossans and Dunfallandy, although only the former have limbs. In most cases the two species, hippocamp and serpent-monster, appear distinct: the latter, which have coiled tails do not usually grasp humans in their jaws and tend to lack limbs. The fact that the two species appear side-by-side on Meigle 1 (lower left in addition to the hippocamp pair upper right) appears to confirm this impression that they are of different kinds. Two examples from Shetland, however, may imply some occasional blurring of the species: the coil-tailed creatures on the St Ninian's Isle shrine-post have forelimbs, and at least one of the confronted pair on the late stone from Bressay appears to have a coiled tail (Ritchie & Scott 2009, 28; *n.b.* while there are limbs visible on the Maiden Stone, these are more likely to be Christ's arms than part of the coil-tailed monsters).

Although Allen dubbed the coil-tailed species 'fish-monster', they lack distinctively fishy characteristics (fins, gills, webbed tails): rather these creatures appear reptilian. Henderson and Henderson referred to them as S-dragons (2004) and this seems appropriate as they are closely similar in form, if not in pose, to images of dragons (*dracones*) in contemporary illuminated manuscripts, such as the ninth-century

Utrecht Psalter, Psalm 148 (see pp 172, 182 at www.utrechtpsalter.nl/#digital-edition). This identification does not negate potential marine associations: although today dragons are primarily thought of as flying creatures, in Antiquity they were typically associated with water. In the apocryphal Gospel of Pseudo-Matthew, a text known in Ireland c. AD 700, and Northumbria by c. AD 800 and apparently also in Pictland (Whitworth 2014), the cave-dwelling dragons (*dracones*) who worship the infant Christ during the Flight to Egypt are explained as ‘an earthly species which is born in the waters of the deep’.

The hippocamps appear to be part of the broad menagerie of fantastical creatures which grace the cross-slabs: some, like the centaur and griffin, of clearly Classical origin, others fantastically *sui generis* (Henderson 1996; Henderson & Henderson 2004, 84). The origin of the Pictish S-dragon may, however, be more complex. Previous discussions have focussed on the motif’s Christian symbolism and Mediterranean antecedents (Trench-Jellicoe 2005), but the confronted pair of serpent-monsters, with prominent jaws and coiled tails, is already established in the pre-Christian, pre-Roman art of both Celtic and Germanic-speaking areas of northern Europe. An example is the S-dragon pair (‘dragon-lyre’) which appears on La Tène-style metalwork, specifically sword scabbards, from as early as the third century BC (Megaw & Megaw 1989, 127–8, figs 181–4). The meaning of this widely distributed motif, which is found in England, France, Italy, Switzerland, and in eastern Celtic lands from Hungary eastwards, is unknown (*ibid.*). Similar motifs are found in the mid-first millennium AD on Gotlandic Picture stones (*bildstenar*) where paired serpents have equine and marine associations and appear to reflect solar cult and iconography of ultimately Bronze Age origin (Andrén 2012). The latest of these, for instance the stone from När Smiss (III), date to perhaps the sixth or seventh century AD (Widerström 2012, 17) and are thus roughly contemporary with Pictish Class I symbol stones, although there seems no direct connection.

Although paired dragons thus appear to be deep-seated in mythology and iconography elsewhere in northern European, surviving Scottish Iron Age art is, with few exceptions, non-representational (though note the massive bronze double-headed snake armlet from Culbin Sands, Moray (MacGregor 1976, *no.* 214). Pictish representations of the S-dragon are perhaps more likely to have drawn on Late Antique models, such as Roman and Germanic military emblems (Fig. 6.6). Potentially the earliest example from Scotland is a possible S-dragon identified on a small iron amulet from Rhynie in Aberdeenshire, which, in the excavators’ opinion, is likely to date no later than the sixth century AD (Noble *et al.* 2013, 1148). The form of the amulet is unique: it appears

to depict a ceremonial pole-axe but the axe-head on one side of the suspension loop is balanced on the other side by an elegantly tapering S-curve which ends in a tight coil. An x-ray of the corroded artefact (Fig. 6.7) appears to indicate the brow and eye of an S-dragon, but this remains uncertain in advance of conservation. While the Rhynie amulet (if correctly identified) would extend the dating of the S-dragon motif in Pictland back at least to the sixth century AD, that would not mean the Trusty’s Hill dragon is necessarily this early. The continued familiarity of the creature into the eighth, ninth or even tenth century (Trench-Jellicoe 2005) is demonstrated by its appearance on late Class II slabs.

The fact that the S-dragon never appears on Class I stones and usually appears on later sculpture alone or paired only with itself underscores its primarily non-‘symbol’ nature. In the whole corpus of Pictish art there appears to be only one clear example of the use of the S-dragon as a true ‘Pictish symbol’. This is the unusual Class II cross-slab from Ulbster, Caithness, which on its reverse has four pairs of symbols grouped around a cross. Six of these symbols are familiar from the ‘canon’, two are not: a lion (top right) and the S-dragon (bottom left). The Ulbster dragon, which faces right, rather than left as at Trusty’s Hill, is paired with the comparatively rare ‘stepped rectangle’ symbol, seen elsewhere on the Class I symbol stone from Roskeen and on five Class II cross-slabs. Like Trusty’s Hill, the Ulbster S-dragon has a tightly coiled tail, but differs from the former in having a pricked ear and a medial line along the length of its body. Notwithstanding a potential theological explanation for the presence of these two creatures on the stone (Whitworth 2014), they are apparently paired with recognisable symbols and thus must be considered as potentially acting as symbols (on defining ‘canonical’ symbols see Forsyth 1997). This readiness to co-opt a ‘non-canonical’ image as a symbol may constitute an extrapolation from the more restrictive rules followed on ‘Class I’ symbol-stones. This innovative attitude is further exemplified on Ulbster by its rule-bending proliferation of symbol pairs on a single stone. It is interesting to note that these two deviating examples, Ulbster and Trusty’s Hill, lie towards the northerly and southerly extremity of the mainland Pictish symbol distribution. There are only two other examples of S-dragons appearing as singletons: Appiehouse on Sanday and Meigle 1 (where the single S-dragon is paired with a facing single hippocamp).

While the Trusty’s Hill S-dragon appears to be a close relative of these various Pictish S-dragons, it is unique in one respect: it exhibits underbelly spirals. These are quite unlike the clearly equine forelimbs on Aberlemno or Tealing and although somewhat similar to the curled ends of the limbs of the ‘Pictish beast’, they are much smaller. If they were indeed



Fig. 6.6. Dacian Draco standard depicted on Trajan's Column. © Radu Oltean/Wikimedia Commons/CC-BY-SA-3.0



Fig. 6.7. X-ray of Rhynie iron axe-hammer pin. © University of Aberdeen/Rhynie Environs Archaeological Project

limbs, then they would be vestigial, but they appear not to be limbs at all: rather, the two stubby spirals seem to represent an open wound on the creature's chest caused by the 'conical spike' (Allen 1903, ii, 479) pointing up to the underside of the beast (Fig. 6.3). This element, which comprises a rounded pelta with spiral terminals and, issuing from it, the long triangular 'blade' or 'point', is recessed relative to the beast, carved more deeply than the rest and with the surface on either side of the blade cut back slightly. Yet the two give every impression of being contemporary elements of a single, unified design. The recessing would have been labour intensive, and therefore must be significant. Ross Trench-Jellicoe tentatively suggests to us (*pers. comm.*) an entirely novel interpretation in which the object is exiting rather than entering the beast: he speculates that the reason for the choice of false-relief was that the scene was 'a formalised depiction of a birth erupting from the beast's belly' (*in litt.*). All previous published explanations, however, have taken the element to be an inanimate object piercing the beast's flank. The object depicted has been variously identified as a whetstone (Radford 1953, 237), a sword (Thomas 1963, 53; Mack 1997, 137), or a triskele-headed pin (Laing & Laing 1984, 266–7). The pointed nature of the item counts against its being a whetstone, yet the lack of a graspable handle or guard makes it an unlikely sword. The 'spike' is far too thick for a hand-pin, though the head is not implausible as such (though if this were indeed a dress-fastening pin the relative scale would imply that the monster is more of a shrimp!). Craig was content to accept the identification as a sword and compared the form of the pelta-with-volutes to similar examples from Pictland, including Abernethy, Dunrobin, Monymusk, and North Redhill, although, as he notes, none of these occur within a weapon handle (Craig 1992, 199). These are general rather than specific parallels. Perhaps of more relevance, is Craig's suggestion that the Trusty's Hill handle is based on a metalwork original such as the ninth century Anglo-Saxon 'Ingelri' sword pommel, recovered from the Thames at Battersea, which is inlaid with a volute pattern (Craig 1992, 199; Wilson 1964, 40, 107, pl. vii). The absence of a hilt guard and grip from the Trusty's Hill object, however, would require explanation if it were indeed a sword.

Ewan Campbell has brought to our attention a far more striking parallel in the form of the recently discovered copper alloy stick pin from Tirefour, Lismore (Fig. 6.8; Campbell forthcoming). The mushroom-shaped head of the pin is incised with a design of lentoids and spirals which strongly resembles the Trusty's Hill design: both share inward turning spirals flanking a central triangle. The Tirefour design can be read as an abstract human face,



Fig. 6.8. Pin from Tirefour, Lismore. © Ewan Campbell

though Campbell suggests this may be fortuitous. The shaft of the pin is highly unusual in being of different cross-section in its two halves: octagonal at the head-end, and round at the tip. It appears rather thick to serve as a dress pin and Campbell explores alternative functions, including stylus and book-pointer (*æstel*). All three are hard to reconcile with the Trusty's Hill scene, yet, visually the similarity between the two objects is close. The uniqueness of the Tirefour pin, both in form and decoration, makes it hard to date, though Campbell suggests the late seventh or early eighth century on art historical grounds (Campbell forthcoming). Before moving on it is worth noting the pelta-with-volutes between the paired beasts on the reverse of the Brodie Stone (although its spirals

turn in the opposite direction to Trusty's Hill and Tirefour). What this item is intended to represent is unclear: it is the uppermost of five elements which display features reminiscent of metalwork: the circles recall cloisonné studs; the spiral and crescent appear to bear bosses, the subdivisions on the pelta may suggest *champlevé* enamel fields like those on Tirefour. These may be representations of objects akin to the symbol-inscribed bronze crescentic plaque from Laws, Monifeith, and the double-disc-shaped plaque from a Norse grave at Ballinaby, Islay (Fraser 2008, 138), in which case the dragons are depicted in their habitual role as guardians of treasure (Watkins 1995, 300).

Whatever the identification of the item depicted at Trusty's Hill, if in fact it is intended as an actual object, it does seem to be *functioning* as a weapon, piercing the underside of the monster. If this interpretation is valid it would mean that what the carving in Area B represents, in abbreviated form, is an event, the wounding or slaying of a monster, giving it narrative rather than simply iconic force. This is a clear contrast with the iconic Pictish symbols which are non-narrative. The question is: is it possible to identify the tale to which this image alludes?

Discussion

Identifying the monster

Monsters are frequent on Pictish sculpture and are often depicted in conflict with humans (Henderson 1996). In these conflicts, however, the monsters threaten, struggle with, or have already vanquished and devour humans. They are never depicted in defeat. This contrasts with Viking art which includes a number of depictions of the slaying of the monster Fafnir 'the worst of all worms' by the great hero Sigurd, one of several episodes of dragon-slaying in Norse mythology (Kopár 2012, 23–56). In order to kill Fafnir and gain his treasure-hoard, Sigurd is obliged to conceal himself in a pit and thrust his sword upwards into the beast's underbelly. The scene is depicted on a Viking Age cross-slab from Jurby in the north of the Isle of Man, a short sea journey from the Kirkcudbrightshire coast (Kermode 1907, 174–6 no. 93, Manx Museum No. 119; Cubbon 1983, 26–7). Wear on the cross makes the details difficult to see but the sinuous body, coiled tail and massive jaws and snout of the creature are readily discernible. A similar scene is depicted on two other Manx cross-slabs: Malew and Andreas (Kermode 1907, 176–8, no. 94–5, Manx Museum No. 120–1). All three are consistent in their iconography and depict a crouched figure thrusting his sword upwards from the left into the underbelly of a retrograde S-curved dragon. Further episodes

from the Sigurd legend are depicted on other Manx stones alongside Christian iconography, as they are on a number of Anglo-Scandinavian sculptures from Cumbria, Lancashire and Yorkshire (Kopár 2012, 34–9).

Although he did not make an explicit suggestion of a Norse context for Trusty's Hill, Craig drew attention to a number of Sigurd and Fafnir scenes, including Jurby and Kirby Hill 9, as 'Scandinavian versions' of the S-dragon and sword pairing seen in Scotland only at Trusty's Hill and on Fowlis Wester 2, Perthshire (1992 i, 201, n.2). The Fowlis Wester creature (Henderson & Henderson 2004, 154) is strikingly similar to the Trusty's Hill beast but the sword, with its clearly delineated handle and guard, is of a different shape and, crucially, rather than pierce the monster, lies parallel to it with its tip pointing away from the creature's body (Fig. 6.9). The sword is accompanied by a circular object which may be a shield. Whether these are the weapons of the naked human figure being swallowed by the monster on the right, or constitute a treasure hoard, is unclear (*c.f.* the possible treasure hoard between the pair of S-dragons on Brodie; but note the circular object (a shield? a paten? a coin?) between the pair of S-dragons on Logierait 2 (Fig. 6.5). The importance of these creatures to the iconographical programme of the Fowlis Wester stone is reflected in their size and prominent position at the top of the slab above the upper arms and ring of the cross. The two Fowlis Wester monsters are identical, but the question is, are these a pair of twins, with somewhat different iconographical functions, or are they intended as sequentially depicting two episodes in the story of a single creature? Although the human grasps the underside of the creature's jaw, it is the monster who has the upper hand, its powerful jaws are clamped firmly around the person's head. It is tempting to interpret the semi-circular element which protrudes from the jaw of the left-hand dragon at Fowlis Wester as a ring akin to the cursed ring guarded by Fafnir which is central to the Sigurd story and depicted on some Scandinavian versions. However, comparison with the Brodie S-dragons suggests that the curve is more likely to depict the creature's protruding tongue. In any case, whoever the assaulted naked figure to the right is, he is clearly not the hero Sigurd triumphing over the dragon.

One problem with the Fafnir interpretation at Trusty's Hill is the obvious lack of a Sigurd. Yet this is not necessarily a fatal objection: there are a number of visually abbreviated versions of the *Drachenstich* motif which lack the hero figure and consist only of an upward-thrusting sword embedded in the dragon's body, *e.g.* the carved stone from Tanberg, Bukerud, Norway; the eleventh century Norse axe-handle from Vladimir-Susdal, Russia; and, geographically much



Fig. 6.9. Fowlis Yester 2 (detail). © Crown Copyright: RCAHMS. Licensor www.rcahms.gov.uk

closer to Trusty's Hill, a lost stone from Kirby Hill, North Yorkshire (Bailey 1980, 119 fig. 19; Kopár 2012, 34–9; Lang 2001, 133 illus. 358; Williams *et al.* 2014). Trusty's Hill parallels these in depicting a pointed object thrusting upwards to pierce the S-curved dragon. If it too were a depiction of the death of Fafnir, it might go some way towards explaining the recessing of the weapon in false-relief: it is central to the story that the blade is wielded from a concealed pit below the creature. There are, however, further problems with this interpretation. Stylistically, the Trusty's Hill dragon is more closely related to the eastern Scottish examples than to any of the Norse ones, and Norse influence would mean a date no earlier than the late ninth century, and more plausibly the tenth or eleventh century, *i.e.* well after the end of the Pictish symbol-carving tradition which is generally presumed to have ceased in the mid-ninth century (Carver 1999, 21). Anglo-Saxon reflexes of what is a pan-Germanic tale (*e.g.* the dragon-slaying Sigemund in *Beowulf*) would doubtless have been available in south-west Scotland before this date, but

we know of no tradition of representing the scene in pre-Scandinavian English art.

If the dragon is not Fafnir, then perhaps a source is to be sought in native Celtic tradition. Watkins has identified the motif of the 'god/hero killing a dragon or other reptilian adversary' as being so widespread as to be 'quasi-universal' (1995, 297). Nonetheless, he identified distinctively Indo-European 'modalities of the myth', expressed in both Celtic and Norse traditions which are relevant here. Certainly, serpent-monsters are no strangers to Celtic literature, whether Goidelic or Brittonic (Borsje 1996; Minard 2007; Campbell 1911; Simpson 2001) and there are a number of Irish and Welsh tales which feature a hero fighting a treasure-guarding reptile (Simmons 2006). In Irish tradition the monster is often explicitly a water creature, as in *Táin Bó Fraech* and in the tale of Fergus mac Léiti and the *muirdris* (Watkins 1995, 441–7), and as it often is in Scottish Gaelic folk tradition (MacilleDhuibh 2014). Not all Celtic dragons are malign, however. Sims-Williams notes that positive '[c]omparisons between rulers

and dragons or serpents are commonplace in early Celtic panegyric', citing, for example, the sixth century British-Latin writer Gildas's description of Maelgwyn, king of Gwynedd, as *insularis draco* 'dragon of the isle', and the epithet of Selyf son of Cynan, *Sarffgadeu* 'serpent of battles/armies' (2014, 53). Note also the epithet of Arthur's father Uther: *Pendragon* 'chief of dragons'. Perhaps most positively of all, the red dragon (*Draig Goch*) appears as a literary symbol of Brythonic identity as early as the first half of the ninth century in *Historia Brittonum* (Simmons 2006, 10; Lofmark 1995). A distinction must be drawn, however, between literary motifs and visual representations. In the twelfth century, Geoffrey of Monmouth imagined Arthur as having had dragon devices on his battle gear and the dragon was in use as the heraldic emblem of the Tudors from the mid-fifteenth century (Simmons 2006; Lofmark 1995) but, while it is easy to accept the positive use of a dragon as a personal or family emblem, and conceivable that such an image might be defaced by an enemy, to create a modified version of such an emblem and use it subversively seems anachronistic and is not, as far as we are aware, paralleled in early medieval Insular symbology.

Although reptilian monsters are ubiquitous in Insular art in the early Middle Ages, and S-dragons appear to have been a widespread element in Northern iconography, both Celtic and Norse, since the Iron Age, the *slain* dragon is something more specific. There does not appear to have been a tradition of representing it in Britain or Ireland before the Viking Age. Trusty's Hill remains the only secure example of a *wounded* dragon from Scotland (its open eye apparently indicates it is still alive, even if mortally injured). It is the *piercing* of the Trusty's Hill dragon which suggests the identification as Fafnir, although the emphasis given to the lethal instrument at Trusty's Hill is consistent with the prominence of the sword in the Norse myth: the sword which Sigurd used to slay Fafnir was a special one, forged by the smith Regin from fragments of the sword which had belonged to Sigurd's father, it succeeded after two others had failed (Kopár 2012, 23). Special, named, and often ancient swords feature prominently in other Norse episodes of dragon-slaying (Watkins 1995, 414). In contrast, Celtic tradition generally places less emphasis on the special properties of swords: it is the monster-slaying hero who is special, not the weapon he uses for the deed. There are remarkable swords in Celtic literature, of course, and Borsje notes a small number of cases from early Irish sagas of a hero's weapons being 'alive' and acting (and speaking) without human intervention, but these few examples relate to man-to-man combat and none of the self-propelling swords act to slay monsters (1999, 230–1).

The place-names of south-west Scotland provide

evidence of the 'complex sequence of languages' spoken there before the twelfth century, 'some of which must have co-existed for a considerable time' (Taylor 2001, 480). These comprise the native Cumbric (*i.e.* Brittonic/British), interleaved with the languages of incomers: Anglian (from the seventh century), Gaelic and Norse (from the ninth century). Thus at various dates any of the traditions referred to above could plausibly provide a context for the monster. While the portrayal of a defeated dragon might resonate with a Celtic-speaking audience, the specifics of the image point rather to Germanic tradition. Against this must be counted the stylistic connection with eastern Scotland and, most obviously, the fact that the creature is juxtaposed with an indubitably Pictish double-disc. Whatever the date assigned to the two elements, the carving technique used suggests they are contemporary with one another and distinct from all other carving on the rock face. They are meant to be read together. As noted above, Pictish symbol statements typically consist of a pair of symbols, sometimes modified by a mirror with or without a comb (Forsyth 1997), thus the Trusty's Hill carvings are consistent with the Pictish norm in being paired, even if they diverge in other respects. On Class I symbol-stones the two principal symbols are typically placed one above the other (with the mirror or mirror-and-comb below) and there are only a few exceptions to this 'rule' (*e.g.* Arndilly in Moray; Rhynie 5 in Aberdeenshire). Even on Class II monuments side-by-side pairings are very rare (*e.g.* St Madoes). There appears to have been ample room for the monster on the rock surface below the double-disc at Trusty's Hill, so the side-by-side placement must be deliberate, although its significance is not clear. Of course, the Trusty's Hill symbols are carved on bedrock, not on a symbol-stone monument, so rules governing the latter may not have applied (it is harder to discern vertical pairings among the mass of symbols and other Pictish carvings on the caves at East Wemyss or Covesea). The S-dragon is not found on Class I and thus, is not to be counted as a member of the basic symbol set, especially as it appears on numerous Class II and other cross-slabs functioning other than as a symbol. However, its use on the Ulbster stone appears to indicate that in certain circumstances the S-dragon could be co-opted to function as a symbol within the Class II tradition. Even so, the Ulbster and Trusty's Hill S-dragons are not identical and the apparent narrative context of the latter means we must be cautious in assuming that it functions exactly as a second symbol would. The Trusty's Hill carver knew, more-or-less, what a double-disc should look like and that it should be paired with something else. Beyond that, however, there is an air of improvisation about the work. The specific message intended by these carvings may not

be recoverable, unless there is an improvement in the current poor state of understanding of the meaning of the symbols and of the origin and function of the S-Dragon on sculpture from eastern Scotland. Insight into their general significance, however, may be gleaned from comparison with other 'Pictish' carvings furth of Pictland.

Comparanda

Two other rock-faces in Scotland bear incised animal carving: a single boar carved on a rock-face at the fort of Dunadd, Argyll, and a group of three stags at Eggerness, Garlieston, Galloway. George Henderson (2008) asserts that the Dunadd boar is in distinctively Pictish style (*contra*. Campbell 2003, 48–9). In a small number of cases Pictish mammal 'symbols' are found paired with geometric symbols, but some (*e.g.* the Inverurie horse, the Burghead bulls) appear alone: so the Dunadd boar is not exceptional in this respect. The fine stag and its two lesser companions incised in a flowing style one above the other on a cup-and-ring-marked rock-face at Eggerness are not distinctively Pictish in either arrangement or style, although there is the suggestion of a joint scroll on the rear leg of the upper stag (Morris & Van Hoek 1987; Gray 1992; Mack 1997, 144). The Eggerness deer are difficult to date and even if they are early medieval, which Craig doubted (1992, i 200), it is not known whether they would pre- or post-date the Trusty's Hill carving just a few kilometres away across Wigtown Bay. Trench-Jellicoe would prefer to assign them to a Scando-Insular context in the late tenth or early eleventh century (*pers. comm.*). The nature of the Eggerness carvings, in both design and technique, is distinct from those at Trusty's Hill, indicating a degree of separation even if they do provide a local context for the carving of designs on significant exposed rock-faces. The Eggerness carvings are poorly understood and the nature of the activities which took place at the incised rock-face is unclear – there are no known associated structures – but the presence of a series of spirals, cups, and cup-and-ring marks on adjacent outcrops indicates that this elevated site overlooking the sea was a centre of ritual activity from the Bronze Age.

There was only a limited tradition of stone-carving in south-west Scotland in the pre-Viking Age (Craig 1992). The fifth century inscription at Whithorn and the sixth century one from Liddesdale represent an evolution of local, late Roman period stone-carving (Forsyth 2009). The very fine cross-carved inscriptions from Kirkmadrine and Whithorn ('Peter Stone') reflect a separate, ecclesiastical phenomenon of the sixth and seventh centuries respectively (*ibid.*). There was limited stone-carving at Anglian Whithorn in the eighth century (Craig 1992; Collingwood 1925), and at the early monastic site at Ardwall Island, only

a few kilometres south of Trusty's Hill and which includes an Anglo-Saxon inscription (Thomas 1967). The Trusty's Hill carvings have little in common with any of these, which are burial monuments at ecclesiastical sites, nor do they seem technically close to the Eggerness carvings, despite both being incised on exposed rock-faces. Profile analysis of the incised lines might establish whether the tools and techniques used at Trusty's Hill were local or not. A range of incision techniques appear to have been used on Pictish Class I symbol-stones (Gordon 1956) but these have not yet been mapped or dated. It would be impractical to attempt to carve a rock-face in relief due to the large amount of stone which would have to be removed, which may be sufficient to account for the fact that although the Trusty's Hill symbols have features in common with Class II versions of symbols, they are incised like Class I.

Despite the idiosyncrasies discussed above, the 'Pictish' credentials of the Trusty's Hill double-disc symbol cannot be doubted. The difficulty then is to explain its presence so far south: Trusty's Hill is over a 100 miles (*c.* 160 km) from the most southerly Pictish symbol stone (Edinburgh), itself a southern outlier by at least 30 miles (48 km). Of course, it must always be remembered that the symbols did not appear only on stones even if this medium is the most heavily represented in the surviving archaeological record. Symbols also feature on a wide range of portable objects, including *de luxe* jewellery, stone and bone gaming-pieces, and small stone objects of unknown function (Fraser 2008, 138–40). The survival of a simple bone pin from Pool in Sanday demonstrates that even humble objects in organic materials might bear symbols. These are all highly mobile objects, circulating at different social levels even in politically peripheral places in the far north of Pictland, and they raise the possibility that the distribution of symbols was originally wider than the symbol stones alone suggest. They are also important for emphasising that symbols could be used in a wide range of contexts, not only in the apparently memorial context of 'Class I' symbol stones.

Trusty's Hill is not the only southern outlier of the Pictish symbol distribution: a very fine pair of symbols – a double-disc and Z-rod, and notched rectangle – appear on the terminal ring of a massive silver chain from Whitecleuch in Lanarkshire, about 60 miles (*c.* 97 km) north of Trusty's Hill (Henderson 1979). Despite its (relative) geographical proximity to Trusty's Hill, the Whitecleuch double-disc and Z-rod is rather different in style. Curiously, its engraved Z-rod is a true 'Z' in comparison to the Trusty's Hill and most Class I retrograde Σ versions and its discs are decorated with swirling spirals instead of concentric circles, a feature paralleled on late Class II cross-slabs (*c.f.* Ulbster, Strathmartine 5, Kirriemuir 2). Again in

contrast to Trusty's Hill, the Whitecleuch flouriations bend in the usual S-curves towards the middle of the rod. Whitecleuch's central bar is comparatively short, though it also contains the typical pinch or matching convex curves. Overall, the stylistic details of the Whitecleuch symbol fall well within the Pictish metalwork idiom: its spirals and short connecting bar echo those of the double-disc and Z-rods on the Norrie's Law plaques, which also share almost identical flouriations. If the Trusty's Hill symbol-carver drew inspiration from portable artefacts, the Whitecleuch chain itself did not provide a direct model. Henderson considered the Whitecleuch chain terminal to have been made 'long before' the Trusty's Hill symbols were carved and saw 'no reason to connect these two Pictish traces in South-west Scotland' (1979, 27). She linked the Whitecleuch chain to a plain example from Walston further east in Lanarkshire, suggesting an ultimate origin in southern Pictland, perhaps Fife (*ibid.*). In a more recent discussion, Youngs has also drawn comparison with Pictish silver from Fife, observing that 'the richer more florid infill' of the Whitecleuch symbols is 'close in style' to that of the Norrie's Law plaque, which she would date to 'the later seventh century' (2013, 411). While there is unlikely to be a direct link between the Whitecleuch chain and the Trusty's Hill symbol, Whitecleuch does provide valuable evidence for one of the routes by which Pictish contact was mediated to the south-west: its find-spot lies close to a major route south into Galloway as it crosses the watershed: an important boundary zone perpetuated in the historic county boundary between Lanarkshire and Dumfriesshire.

In addition to the Whitecleuch chain and the Trusty's Hill carvings, there are two more outliers from the main distribution of Pictish symbols: the canonical Class I symbol stone from Princes Street Gardens in Edinburgh 'which bears a double-disc and Z-rod below a crescent and V-rod' and the aforementioned boar on the summit of Dunadd. Previous writers have struggled to suggest historical scenarios which could account for the presence of these Pictish symbols apparently so very far from the land of the Picts. Some have been content to follow Henderson in her opinion that Trusty's Hill could be 'safely dismissed as an outlier' (1967, 114). Radford, by contrast, was of the opinion that the Edinburgh, Trusty's Hill and Dunadd symbols were carved to commemorate Pictish leaders who fell in attacks on these fortresses (1953, 238). This explanation was adopted, at least in the case of Trusty's Hill, by Thomas (1961, 60; 1963; 1981, 288) and has been oft-repeated since (Laing 1975a; Laing & Laing 1979, 247; Oram 1993, 14), yet it seems inherently implausible.

That there is no historical evidence for Pictish military activity in Galloway is, admittedly, a weak

argument as our historical evidence is so extremely scanty, but why would raiders commemorate one of their own so far from home using a symbolic system alien to the local population? And why would the locals not deface any such memorial to their own degradation once the enemy forces had departed? It is a mistake, in any case, to assume that the symbols are necessarily commemorative, to do so is to confuse the function of Class I symbol stones (which do appear to be broadly funerary) with the much wider range of functions to which portable objects and cave graffiti demonstrate the symbol writing system could be applied (Forsyth 1997). The Trusty's Hill symbols are not graffiti hastily scratched, but rather a substantial and carefully laid-out carving in a highly visible location at a power centre, which itself occupies a commanding position. Their siting on the approach to the citadel is also central to any understanding of how they work. The viewer would encounter them as he or she approached the entrance to the inner part of the fort. They are positioned opposite the rock-cut basin whose function, though not fully understood, may have involved some ritual activity. The symbols are thus part of a multi-element statement about the power of the inhabitants of the fort. Whatever the content of that statement it must have had meaning for a *local* audience, its likely explanation lying in *local* politics and aspirations.

The parallels with Dunadd seem particularly strong. Previous explanations of its Pictish boar are centred on a historically attested attack on the fort in AD 736, and seen in terms of a kind of 'ethnic tagging' by the Pictish raiding party. Jackson presumed that it must therefore be an assertive and thus offensive image and was puzzled that the locals allowed it to stand after the Pictish departure. He deduced from its continuing presence that the site must have been abandoned thereafter. Subsequent archaeological investigation has shown this not to be the case - the site remained in use long after that, and continued to be a 'significant place' for the transaction of royal business well into the Middle Ages (Lane & Campbell 2000). Knowledge of Dunadd's broader historical context has also been greatly enhanced since Jackson wrote and it is now understood that what happened in AD 736 was not an isolated raid but in fact part of a process of conquest of Argyll by the Picts under the leadership of Onuist son of Fergus (729–761), one of the greatest of all Pictish kings, a major figure in British politics in the eighth century (Fraser 2009; Broun 2012).

Recent work on the carvings at Dunadd (Forsyth 2012) has suggested that the major remodelling of the site which archaeology shows occurred in the mid-eighth century most likely reflects this change of regime and its need for a new venue for political theatre. Part of this remodelling was a new focus on

the exposed rock-face at the summit, which is carved with the boar, an ogham inscription, a foot-print and a small basin, all of which appear to relate to royal inauguration ritual. It cannot be determined whether the various carvings on the rock-face were added as part of this remodelling or were already in existence (or indeed, added later). Nor can it be established whether or not they were carved as a single package or were added cumulatively. However, the stylistic link between the Dunadd boar and similar animals on symbol stones from Dores and Knocknagael, Inverness-shire, has prompted Forsyth to speculate that the boar's presence in Mid-Argyll was meant to articulate a change in political orientation towards the Pictish north and the kindred of Onuist (2012). Following Jackson, one might choose to see this political message as having been imposed on the locals by their new Pictish overlords, but equally it could have been an active expression of adherence and loyalty to the new overlords on the part of a newly ascendant local faction which survived regime change.

The similarity between the two raises the question of whether they are independent responses to analogous political circumstances or whether Trusty's Hill might be directly modelled on Dunadd (or *vice versa*). Of course the circumstances at the two fortresses are not completely identical. The royal inauguration rituals at Dunadd involved the king standing on the flat slab of living rock. The Trusty's Hill slab slopes too steeply for this, it is meant to be looked at, not stood on. However, the proximal relationship of both to the entrance to the upper citadel of each fort, and the presence of a tank at Trusty's Hill and an admittedly much smaller basin at Dunadd, may point to cognate origins in political rituals.

Cessford asserts that the outliers (Edinburgh, Trusty's Hill, Dunadd, Whitecleuch) constitute evidence that non-Pictish groups 'occasionally adopted the Pictish symbols for their own purposes when they wished to' (1994, 83). Such use was clearly highly selective. The users of Pictish symbols outside Pictland were unique in their regions, and thus they cannot have used them quite in the same way as those in Pictland who were surrounded by other symbol users. A helpful comparison may be made with the contemporary picture-stones of Gotland. Over 500 survive on the island itself with only four known from elsewhere: two on the neighbouring island of Öland, one from the Mälaren district of mainland Sweden (on a geologically distinctive piece of stone imported from Gotland) and one from across the Baltic in Latvia. These latter two both bear runic inscriptions which stress that they had been acquired in Gotland (Lamm 2012, 25). As with Pictish symbols, the tradition of erecting Gotlandic picture-stones continued over many centuries and

was renewed several times. Swedish scholars view it as being 'firmly established as a vital component in an ethno-genesis, namely the process of creating the cultural and ethnical identity of the Gutar - the people of Gotland' (Varenius 2012, 48). When erected outside Gotland, these iconic monuments appear to have been a means for highly unusual families or individuals to assert some connection with Gotland, whether that association was one of personal or family origin, or a looser one of political, military or commercial connection. It is interesting that at both Dunadd and Trusty's Hill the Pictish statement is tied to its geographical location in an emphatic way by being carved, not to a moveable pillar-stone but to the living rock itself, something that, with the exception of cave graffiti which is a separate phenomenon, is not found in Pictland.

The historical context

What kind of connection might have existed between the lords of Trusty's Hill in the eighth, ninth or tenth centuries and Pictland? The situation at Dunadd is different from that at Trusty's Hill. Argyll is known to have been under the overlordship of Pictish kings from the mid-eighth century, which was never the case in Galloway. While it can be emphatically stated that Galloway was never part of 'Pictland' (Oram 1993), in the sense of having ever been under the rule of a Pictish king or ever having been thought by contemporaries to be 'ethnically' Pictish, this does not imply that Galloway need have been entirely divorced from Pictish politics, nor that there were never any Picts there. Earlier models of the political history of early medieval Scotland have tended to be simplistic and overly ethnicised. More recent accounts have emphasised instead that major leaders such as Onuist ranged widely in their activities and were not constrained by purely ethnic loyalty: ethnicity was no barrier to an advantageous alliance. Even the famous Battle of Nechtansmere (AD 685), on which so many previous theories have been hung, was not a simple Manichean fight between Anglo-Saxons and Picts but apparently something altogether more complex, with different factions of Picts on either side (Fraser 2009, 202–3).

The factionalised politics of the age meant that members of ruling dynasties frequently spent periods of time in exile, or, if they were female, could be sent forth of their homeland in marriage, as were Máel-Muire (*d.* 913), daughter of Cináed mac Alpín, and her anonymous sister who left Pictland to marry kings of the Irish and Strathclyde British respectively (Woolf 2007, 115 & 111). Such noble brides and exiles would have been accompanied by entourages which befitted their status. Population movement on a slightly larger scale is implied by the references to the migration of a

Pictish kindred from Skye to Ireland under Cano mac Gartnait *c.* 668, although they returned after a mere 3 years (Fraser 2009, 204–5). We have literary sources relating to Ireland, Northumbria and Strathclyde from which we can piece together Pictish dynastic and ecclesiastical links with these areas. Such sources do not survive for south-west Scotland in this period but similar connections are highly likely (Cessford 1994, 83), bearing in mind that, notwithstanding the evidence of contact via overland routes provided by Whitecleuch, the coastal location of Trusty's Hill suggests any such contact could have been via sea and need not have been with the parts of Pictland, such as Fife, closest as the crow flies. A number of Pictish kings had southern interests: Pictish royal patronage of the church at Durham is documented in the Durham Liber Vitae *c.* 840 (Forsyth 1999). Artistic links between Pictland and Mercia which are evident in sculpture (Plunkett 1998, 226) are a reflection of diplomatic links - secular and ecclesiastical - which were sustained by the movement of individuals who necessarily had to travel through southern Scotland. There was also movement in the other direction, *i.e.* from south to north (and then back again). In the late eighth century, at a time when Galloway was under Northumbrian political control, two Northumbrian kings, Alcred (774) and Osald (796) sought temporary exile in the Pictish court (Forsyth 1999, 26; Fraser 2009, 332). Visitors would have seen symbol-carved monuments during their stay and returned with memories of their form and significance.

Previous writers have attempted to use historical context to provide a date for the Trusty's Hill symbols, fixing on the date of the Battle of Nechtansmere in AD 685 as alternatively a *terminus post quem* (Radford 1953) or a *terminus ante quem* (Thomas 1961). Improvements in our historical understanding mean we can now see that Nechtansmere is a red herring. We know too little about the history of Galloway in this period to rely on external evidence in this way. The archaeological evidence for the history of the site is a surer guide but even this is not unproblematic. The recent excavations have demonstrated that the principal occupation of the site lasted from the late fifth to the early seventh century. It would be natural to assume that the carvings also dated to this period, but the history of Dunadd must give us pause. Long after domestic occupation had ceased, there are hints in the archaeological evidence that people continued to return to it on a periodic, possibly seasonal basis. Feasting debris testifies to major gatherings in the tenth and eleventh centuries. The fact that royal business continued to be enacted at Dunadd as late as the sixteenth century demonstrates the length of its political 'after-life' (Lane & Campbell 2000, 96–7). It is possible that Trusty's Hill also retained some

form of political significance (as a site of assembly, legal proceedings or political ritual) long after it had ceased to be permanently occupied, and if so, then the carvings could have been added to the rock outcrop at any time, to augment the existing staging for political drama. Improved understanding of the archaeology of the fort will help contextualise the carvings but the only sure way to date them is on the basis of their style. Unfortunately the dating of Pictish sculpture is far from settled. Further work on the stylistic details of both Class I and Class II symbols will surely help to refine the dating of the Trusty's Hill pair. For now we can assign them most easily to the period of Class II, *i.e.* late seventh at the earliest and more probably eighth to ninth century, if not later (certainly so, if the possible Norse connections of the Trusty's Hill dragon, are accepted).

Archaeological evidence suggests that Trusty's Hill was abandoned for domestic occupation long before the time stylistic evidence indicates the carvings were made in the rock. By this time the site itself may have accrued legendary significance. Place-name evidence in the south-west testifies to an interest among the tenth-century Britons, who had recently re-gained political control of the area, in the heroic figures of their legendary past. The use of the element *caer* in the names of the forts Caerlaverock and Carwinley suggests they were likely coined in the tenth or eleventh century, though they are named for sixth century historical figures famous in later literary tradition: Llywarch Hen and Gwenddoleu ap Ceidio (Watson 1926, 367–8; Koch 1997, xxxii–xxxiii, n.3; Hicks 2005, 92; Phythian-Adams 1996, 85). Such coinings reflect not simply an 'antiquarian' interest in local history, but are likely to have had explicit political connotations. We do not know the ancient name of Trusty's Hill (this name being a modern coining), unless it is preserved in the name of nearby Cardoness Castle, but it is possible to see in the carvings a similar impulse to tap into sources of ancient authority at a time of political and social disruption (it is worth considering the possibility that the use of symbols on late Pictish cross-slabs may, similarly, reflect a conscious appeal to ancient authority, rather than a simple continuity from earlier usage).

The political and ethno-linguistic history of Galloway is not well understood but one thing is certain: it is complex and multi-layered. Changes of political regime and influxes of settlers meant that old orders were repeatedly over-turned, new identities were forged and contested. Material culture was a means of constructing and displaying such identities. The carvings at Trusty's Hill must be seen as part of this process, even if they remain for now, a conundrum. It is odd indeed that they overtly emulate the art of the one ethno-linguistic group not known

to have been present in this ethnically diverse area. The Trusty's Hill double-disc and dragon are both like and unlike their Pictish models. There is something eclectic and improvisational about them. They are in key respects *sui generis*.

The precise nature of the authority invoked at Trusty's Hill is hard to know. On a more general level, dragon-slaying symbolism was polyvalent and might separately or simultaneously signify, for instance, the triumph of good over evil, the virtue of the heroic warrior, the authority of the ancient past, or, the promise of treasure (or inversely, the death that is the inevitable consequence of the pursuit of treasure and/or armed conflict for material gain). Conflicts with dragons, when not underground, in caves or under water, were frequently depicted as occurring on hilltops, which might have made this a particularly suitable site for such an allusion.

Kopár (2012), in a detailed study of the iconography of Viking Age sculpture in Man and Anglo-Scandinavian areas of northern England, has examined the political integration and cultural adaptation and assimilation of Scandinavian settlers in areas immediately adjacent to Galloway from the later ninth century onwards. She sees the sculpture in these areas as 'cultural documents of an intellectual process' (2012, xxi), their creation and reception a process of 'intercultural dialogue' which may have parallels to what was happening at Trusty's Hill. Kopár argues that the use of mythological or heroic references from pagan Norse mythology on these

Christian monuments has a range of motives, from the general to the specific. The depiction of ancient heroes may reflect a genealogical assertion by patrons who claimed descent from the legendary figure in question. The presence of such a hero may constitute an exhortation to the audience to live up to the heroic deeds of their forebears. Her arguments would apply equally if the dragon were Anglo-Saxon, Gaelic or Brittonic. Following others, Kopár also argues that many motifs from pagan mythology were imbued with additional meanings within the new Christian dispensation, thus Sigurd the dragon-slayer could be seen as an old covenant prefiguration of St Michael and his conflict with the Serpent of the Apocalypse, and more generally a symbol of the triumph of good over evil (2012, 53–6). A syncretic visual tradition emerged in which individual images might bear multiple meanings: not 'either/or', but 'both/and'. In this context, the impaled dragon at Trusty's Hill could bring to mind dragons who were emblems of chaos, guardians of treasure, or simply an ordeal through which the hero might prove himself – whether these were the Norse Fafnir, the worm slain by the Anglo-Saxon Sigemund, or dragons of local Celtic tradition – and simultaneously, to the Christian, elicit thoughts of monsters slain by saints, both universal (Michael) and the more local (numerous British and Irish saints, including from Pictland, Serf of Dunning, Perthshire), and even by God himself, who, as Ross Trench-Jellicoe reminds us (*pers. com.*) 'with his sword shall punish Leviathan ... that crooked serpent' (Isaiah 27:1).

Discussion

The stratigraphy and chronology of Trusty's Hill

Prior to the 2012 excavation, Trusty's Hill was little more than a curiosity, encumbered somewhat by the disappointing results of the previous excavation. This had unfortunately failed to recover sufficient evidence to convincingly explain why Pictish Symbols had once been carved into an outcrop of rock at the entranceway to the summit of this hillfort. The meagre assemblage of artefacts recovered in 1960 indicated a rather modest farming community and provided no insight as to the context for the Pictish inscription. Other than the lower half of a granite rotary quern, which merely suggested occupation at some point *after* 200 BC, the archaeological evidence simply could not pin down when the summit of Trusty's Hill was occupied, let alone the status or nature of occupation. It is thus understandable that the only other fact established by the 1960 excavation, that the summit was encircled by a vitrified rampart, was employed to concur with the theory that the carvings were the work of a Pictish raiding party commemorating a fallen leader responsible for the fort's fiery demise, despite the recognised implausibility of a monumental mason in a raiding party (Thomas 1961, 60 & 68). While the new evidence recovered from the site offers a more complex explanation, perhaps one of the most surprising aspects of the 2012 excavation is that the new radiocarbon dating evidence demonstrates that Charles Thomas was correct in his interpretation that Trusty's Hill was occupied over two phases, first in the Iron Age and then in the post-Roman period (1961, 66–8).

However, before this evidence is explored, it is probably necessary to explain why the 2012 excavation recovered so many more finds than the 1960 excavation. For a start, the 2012 excavations reached a greater depth than the 1960 excavations. By

fully excavating the depth of the occupation deposit encountered in Trench 4 in 1960, the latest excavation revealed not just bedrock but the collapsed unburnt stone face of the rampart beneath. The evidence also showed that the stone rampart apparently encountered just below the surface in Trench 5 in 1960 was in fact the interior rubble collapse of the rampart rather than the rampart itself. The recovery of a significant number of artefacts in 2012 from the backfill deposits of Trench 4, notably the Anglo-Saxon style horse harness mount (see Chapter 4), also demonstrated that the previous excavation had not recovered the full assemblage of artefacts contained within the deposits it encountered in 1960. This was almost certainly due to the scarce resources and torrential rain that the previous excavation endured (Thomas 1961, 60; *pers. comm.*). On the one day it rained during the 2012 excavation, it was noticeably much more difficult to observe artefacts in the now very sticky dark soil deposits, even when sieving. Fortunately, the 2012 excavation was overwhelmingly conducted in ideal sunny dry conditions, which, together with greater volunteer and professional resources and the employment of a large dry-sieving table for almost the entirety of the excavated soil deposits, maximised the recovery of artefacts. Other than topsoil, almost the only excavated soil deposits not sieved on site during the excavation were those deposits taken for palaeo-environmental assessment. The subsequent process of wet-sieving, sorting and assessment recovered several important artefacts including clay mould fragments and an Iron Age glass bead. Furthermore, while the two apparent caches of large rounded stone pebbles in Trench 4 represent more the deposition of backfill after the 1960 excavation than direct stockpiles, this concentration of distinctive unburnt stones enabled identification of similar large rounded pebbles in undisturbed deposits in the same trench on the eastern side of the

summit which might otherwise have gone unnoticed. This suggests that these had been deliberately collected and brought to the site for use during the occupation of the hillfort.

However, the 2012 excavation of the previous trenches was not entirely successful. While the re-excavation of Trenches 4 and 5 revealed startlingly different results from that yielded in 1960 and the re-excavation of Trench 2 provided greater detail of what was previously encountered, the re-excavation of Trench 6 did not recover any new evidence at all. Indeed, it was difficult to reconcile the single uniform deposit encountered within the rock-cut ditch with the stratified deposits exposed during the 1960 excavation. Nor was it possible, owing to stone inclusions, to extract a suitable sample from the homogenous ditch fill deposit for the analysis of soil micromorphology. Due to the difficulty in reconciling the 2012 survey plan (Fig. 2.1) of Trusty's Hill with the 1960 plan (Fig. 1.7), which resulted in an aborted Trench 4 to the north of the correct location, it was difficult to confidently locate Trench 6 and it may be that the re-excavation of Trench 6 did not extend beyond the sections of the original trench. It was also not possible within the time available in 2012 to re-excavate any other of Thomas' trenches, especially his Trench 3 located immediately behind the inscribed stone outcrop (Fig. 1.7). In this trench Thomas did not excavate below the rubble collapse from the rampart above and thus the function and nature of this lower enclosed platform remains unknown.

The excavation of Trench 4, along with its adjacent aborted area to the north, confirmed that stone-robbing had removed traces of the rampart from the eastern side of the summit. This corroborates Frederick Coles' remark that the stonework around the summit had been depleted over the course of the nineteenth century (1893, 173–4). Most of the rubble was presumably removed from the site for construction of stone dykes around Trusty's Hill, while some was no doubt used for the sheep-pen and other relatively modern structures previously recorded as overlying the rampart itself (Thomas 1961, 64; Fig. 1.8).

Despite these previous disturbances of the site, a significant quantity of securely stratified artefacts was nevertheless recovered in 2012, the vast bulk of the assemblage from Trenches 4 and 5 on the east and west sides of the summit respectively. Aside from a modest amount of modern material recovered from the topsoil, there were also a couple of anomalous modern finds within the eastern trench which confirm the horizon that Charles Thomas reached in 1960. A shard of modern glass recovered from the sondage through one of the earliest occupation deposits lay directly below one of the circular features cut through the overlying layer (Figs 2.5 & 2.9). This

modern contamination indicates that these two circular features comprised backfill from probing undertaken during the 1960 excavation (Thomas 1961, 63). A fragment of modern tinfoil recovered from the matrix of the interior rubble collapse demonstrates that this deposit had been excavated and backfilled in 1960. The excavation of these backfill deposits, as well as the more obvious backfill which presumably represented that part of the occupation deposit excavated in 1960, revealed underlying archaeological remains that accord with the 1960 record (Thomas 1961, 63–4; Figs 1.8 & 2.9). In both Trenches 4 and 5, the collapsed burnt rubble of the rampart sealed dark soil deposits that sealed the collapsed interior stone face of the rampart that sealed the construction bed of the rampart's foundation trench (Fig. 3.5). That this same sequence of stratified deposits was revealed on both the eastern and western sides of the summit, including deposits unexcavated in 1960 (Figs 2.6 & 2.13), demonstrates that this sequence originated from the occupation of the summit rather than simply the backfilling of Thomas' trenches. This stratigraphy (Fig. 3.5) tied to the construction and destruction of the summit rampart at opposite sides of the hill, thus offers insight into the occupation of the summit as a whole rather than simply localised deposition.

The radiocarbon dating evidence (see Chapter 3) and single Iron Age glass bead fragment (see Chapter 4) recovered from the west side of the summit indicates initial occupation of Trusty's Hill around 400 BC. However, it is unlikely that the summit rampart originated at this time. An early sixth–early seventh century AD date was obtained from the construction layer beneath the rampart in Trench 4 and another early sixth–early seventh century date was taken from the vitrified rampart itself in Trench 5. Unless the construction of the timber-laced rampart took almost 1000 years to reach the east side of the summit of the hill from the west, the likeliest explanation is that the Iron Age material, which was found solely within the foundation trench of the rampart on the west side, is residual. It was probably swept up from the interior of the site and included in the construction layer that formed the primary deposit of the rock-cut shelf around the perimeter of the summit. Soil micromorphological analysis of this construction layer on the west side revealed that the accumulation of this deposit was rapid and that trampling was not evident (see Chapter 5) indicating that this was a deliberate dump of materials to provide a level foundation base for the timber frame and stone core of the rampart. The site may well have been fortified during the Iron Age, but since the foundation trench – and quarry source – for the timber-laced stone rampart appears to have comprised of a rock-cut shelf around the entire perimeter of the summit, where one would

expect the Iron Age rampart to have been located, it is unlikely that any such remains survive.

The Iron Age occupation of Trusty's Hill appears to have been followed by a hiatus of some centuries, as no evidence was encountered for occupation between the fourth century BC and the late fifth–early sixth centuries AD. Bayesian analysis of the radiocarbon dates coupled with the stratigraphy (see Chapter 3) suggest that the hill was re-occupied at some point between the late fifth and mid-sixth century AD; and subsequently fortified with a timber-laced rampart around its summit at some point between the early sixth century and the first quarter of the seventh century AD. Given the refinement of radiocarbon date ranges when compared with dendrochronological results (Barber & Crone 2001, 71–4), the duration of occupation and fortification of the summit of Trusty's Hill may well have been much shorter than these date ranges can demonstrate.

The consistent stratigraphy apparent on both the eastern and western sides of the summit, spanning the period from prior to the construction of the timber-laced ramparts to their destruction, represents securely stratified archaeological contexts for the artefact assemblage (Fig. 3.5). Within this sequence the most surprising discovery was that the dark soil, from which most of the artefacts were recovered, separated the un-burnt collapsed interior stone face of the rampart from its burnt and vitrified rubble core collapse. This indicates that the dark soil and its contents were trampled in during a prolonged phase of destruction prior to the firing of the rampart core and is supported by Laura Hamlet's analysis of the soil micromorphology (see Chapter 5). This material likely derived from the removal of structures and the disturbance of living/working areas to provide fuel for the rampart destruction. While the final deposition of the artefact assemblage therefore occurred during the destruction of the summit, these objects ultimately derive from the occupation of the summit immediately prior to its immolation. The vast bulk of the diagnostic artefacts can either be dated to, or are consistent with, the early medieval period (see Chapter 4). But interestingly, those artefacts that can be closely dated, such as the E Ware pottery sherd and the decorated metalwork, consistently date to between the late sixth and early seventh centuries AD. Refining the span offered by the radiocarbon dating results alone, the stratigraphy and datable finds suggest that the fortification of the summit at Trusty's Hill probably took place in the later sixth century AD and its subsequent destruction took place during the first quarter of the seventh century AD.

The latest date in the radiocarbon sequence, the AMS date spanning the late seventh–late eighth century AD, extracted from a fragment of hazel wood in the primary fill of the rock-cut basin, might be

taken to infer that this feature on the north-east side of the entranceway originates after the destruction of the timber-laced rampart enclosing the summit above. However, a stone bank, comprising part of a horn-work along the eastern edge of the entranceway, was laid out over the stone revetment leading into the rock-cut basin and though this did not survive to a height that might demonstrate that it entirely blocked access into the basin, it certainly implies that the rock-cut basin pre-dated at least part of the architecture of the hillfort. The radiocarbon date in fact only demonstrates that the use of the rock-cut basin continued after the destruction of the fort. The record of a hoard of silver coins of Edward VI and Elizabeth I found nearby to the carvings (Gordon 1794, 351) very likely from the rock-cut basin itself, suggests continued use of this feature, presumably as a local votive well, until as late as the sixteenth century. The late AMS date might be taken to confer corroboration for a late seventh to late eighth century AD date for the rock carvings that lie on the opposite side of the entranceway (see Chapter 6). However, as will be discussed below, given the archaeological context of the rock-cut basin and rock carvings, which flank either side of the entranceway to the summit, an earlier date for the carvings contemporary with the occupation of the summit around the late sixth or early seventh century AD is more likely.

The layout of the hillfort

The topographic survey provides a modern accurate plan of the site (Fig. 2.1) and refines the plan that Thomas produced during his excavation in 1960 (Fig. 1.7). As Thomas recognised, Trusty's Hill comprised a fortified citadel around the summit of a craggy hill with a number of lesser enclosures looping out along lower-lying terraces and crags (Fig. 7.1).

Beyond the evident upstanding remains, it is difficult to extrapolate the internal layout of the fort given the limits of both the 1960 and 2012 excavations. While the assemblage of artefacts, which is discussed in detail below, included plentiful evidence for craft activities, particularly a range of metalworking, there was an underlying domestic character evident to the occupation of the summit. The faunal assemblage, dominated by cattle bone, an assemblage of charred barley and oats, and the lower half of a rotary quern recovered in 1960, all suggest food preparation and eating was undertaken within the summit enclosure. This collection of material corresponds to evidence of domestic occupation seen at other contemporary settlements such as Buiston Crannog, Mote of Mark, Dunadd and Edinburgh Castle Rock (see Chapter 5; O'Sullivan 2000, 155; Crone 2000, 157; Laing & Longley 2006, 176; Noddle 2000, 226; Lane & Campbell 2000, 230; Boardman & Ramsay 1997, 195).



Fig. 7.1. Nucleated fort layout of Trusty's Hill. © RCAHMS/DGNHAS

While only traces of domestic midden and hearth material were recovered, interestingly the dominance of oak, hazel and ash in the charcoal assemblage recovered from the dark soil deposits points towards the burning of structural timbers and wattle across the summit (see Chapter 5).

The fortified citadel on the summit of the hill is divided by a ridge of rock outcrop that separates an upper plateau on the western side from a lower shelf along the eastern edge (Fig. 7.1). The north-west to south-east aligned outcrop effectively divides the citadel in two. Whether these two areas were discrete platforms for structures or outdoor activities is impossible to establish securely from the evidence to date. However, the presence of timber buildings across the western summit area is tentatively suggested by the two rock-cut features located in the eastern end of Trench 5; a linear groove and a large post-hole (Fig. 2.12). Unfortunately, no artefacts or otherwise datable material were recovered from either of these features, which were found immediately beneath the topsoil. It is possible that these were contemporary with the early medieval settlement given the nearby debris dated to the sixth/seventh century AD contained in the deposit abutting the rampart core. However, given the Iron Age debris swept into the adjacent part of the foundation trench of the rampart, it is equally plausible that one or both of these features could derive from earlier occupation in the Iron Age. The large post-hole indicates a post-set structure, though it is not clear that this feature is associated with the linear groove. Indeed these may represent separate structures. While it is impossible to extrapolate what kind of structure(s) these features belonged to, it is worth observing that the upper western plateau of Trusty's Hill measures 25 m long and 7.5 m wide. If these dimensions define the maximum dimensions of a building that may have once stood on the summit here, this would not be very different to the dimensions of high status halls in other parts of the country (Laing & Longley 2006, 171). It is certainly a sufficiently large enough area to easily contain a building such as the 8.5 × 4 m rectilinear building that was partially revealed at the Mote of Mark and which dates from the sixth/seventh century AD (*ibid.*), or the 9 × 5 m post-built hall dating to the early sixth century that was unearthed at Rhynie in Aberdeenshire (Noble *et al.* 2013, 1142). During excavations at Lockerbie Academy, a post-built structure measuring 12 × 5 m and pre-dating an overlying seventh century AD Anglian hall was considered to potentially belong to an earlier British tradition (Kirby 2011, 47–53). Likewise, the eighth century AD hall recorded beneath Cruggleton Castle, either in its original 5.95 × 3.69 m form or its later 12.5 × 4 m extended form (Ewart 1985, 16–20), could have fitted within the summit of Trusty's Hill. Interestingly

this building is associated with the lords or self-styled kings of Galloway (Ewart 1985, 22; Brooke 1994, 79) at a time when Cruggleton Castle was perhaps the principal seat of power in Wigtownshire (Ewart 1985, 6; Oram 2000, 245). The western summit area of Trusty's Hill is therefore sufficiently large to accommodate an early medieval building of some stature. While this is plausible, the topographic survey of the site may also be read to suggest several possible building platforms across the upper western plateau (Fig. 2.1). Obviously a much more extensive excavation area across this part of the site would be required to actually demonstrate the form and extent of any structures.

Within the lower eastern shelf of the summit which measured 23 m long and 6.5 m wide, an eastward spread of rubble was encountered in Trench 4 that was stratigraphically distinct from the evident inward collapse of the outer rampart core. The eastward spread likely derived from the collapse of a dry stone structure to the immediate west of Trench 4. This structure may have been an internal wall that formally separated the upper western area from the lower eastern shelf of the summit and may relate to a functional separation of these areas. While the bulk of the artefacts occurred in deposits associated with the prolonged destruction of the ramparts, it is interesting to note that the evidence for metalworking was predominantly recovered from this lower area on the eastern side of the summit. Although this may simply reflect the larger excavation trench here, the evidence suggests that the lower shelf of the summit was used as a workshop or industrial yard. Interestingly, the vertically set slabs of a three-sided structure was evident, albeit sadly unexcavated, within this lower shelf of the summit (Figs 1.8 and 2.5) and recalls the three-sided structure associated with metalworking at the Mote of Mark (Laing & Longley 2006, 19). The inhabitants may have chosen to differentiate domestic and industrial zones of the summit in a similar, if perhaps slightly less cramped manner, to the Mote of Mark (Laing & Longley 2006, 15 & 20). Similarly, the constricted area of the summit suggests that the settlement at Trusty's Hill, though hosting a workshop, was still in essence a single household settlement, not a multiple household settlement; an estate centre rather than a village.

Surrounding the summit was a timber-laced dry-stone rampart that was approximately 2.3 m wide prior to the collapse of its exterior and interior stone faces. The partial excavation of the ramparts on the east and west sides of the summit confirmed that much of the rubble core of the rampart had been vitrified, which can only occur within a stone structure that was originally timber-laced (Mackie 1976, 208). Carbonised material recovered from the rampart core, predominantly oak, but also hazel,

willow, alder and ash (see Chapter 5), indicates that the ramparts had an internal timber sub-structure, perhaps incorporating oak uprights and wattle walling. This wooden sub-structure undoubtedly contributed some of the fuel that eventually allowed the vitrification of the ramparts to take place. But there were also small quantities of other charcoal and midden-type waste within the rampart contexts and these may represent the remains of midden material that became incorporated into the deposits at a later stage, additional packing material placed within the rampart at its construction or indeed from added fuel materials packed into the exposed core during its destruction. The excavations also revealed consistent evidence for the timber sub-structure of the rampart in the form of large upright post-holes measuring 0.2–0.3 m wide. It was observed that the distance of 1.6 m between the two upright post-holes in the rampart on the east side of the summit was similar to the distance between small scoops evident in the rampart surveyed along the north-west side of the summit (Fig. 2.1) indicating that the timber structure exposed in Trenches 4 and 5 can be applied to the remainder of the unexcavated rampart. Interestingly, the width of the rubble core of the rampart on the east side also measured 1.6 m. This is not so different from the 1.4 m spacing between the horizontal beams observed in the timber-laced rampart at Dumbarton Rock, which also appeared to measure about 2 m in full width (Alcock & Alcock 1990, 110 & 112). It is worth noting that the measurements for the timber-lacing at both Trusty's Hill and Dumbarton Rock broadly correspond to the Roman *passus* (5 Roman feet, or about 1.5 m) perhaps indicating the common use of Roman measurements into the seventh century (Smith 1875, 871). However, these measurements do not correlate with comparable ramparts from other contemporary sites such as the Mote of Mark where the inner core of the northern rampart was 2.4 m and the full width of the faced rampart was 4 m (Laing & Longley 2006, 8). The width of the initial early medieval dry-stone rampart around the summit of Dunadd was 3.9 m (Lane & Campbell 2000, 50), while the overall width of the summit rampart at Dundurn was 3.5–4 m (Alcock *et al.* 1989, 202). This perhaps points to competing traditions of measurement and rampart construction with the choice ultimately down to the individual builders or the availability of materials. By extrapolating the 1.6 m width between uprights from the post-holes observed in Trenches 4 and 5 it is possible to suggest that the rampart contained approximately 24 large oak posts; a substantial outlay in both human and material resources and certainly indicating the control of both.

Unlike the Mote of Mark (Laing & Longley 2006, 11), no direct evidence for horizontal timbers was recovered from the summit rampart at Trusty's Hill

but this is probably due to the severe slumping of the ramparts (see Chapter 3). While the ramparts at Dunadd were not apparently timber-laced, they did comprise a rubble core of small angular stones faced on both the interior and exterior sides with large flat slabs (Lane & Campbell 2000, 50–1). The appearance of the rampart at Dunadd would not have been dissimilar to the summit rampart at Trusty's Hill. Thus, while the choice of construction and size was a matter for individual architects, a similar impregnable appearance was undoubtedly sought and was likely a key factor in the reasons for adorning a northern British hilltop with a rampart.

It is important to emphasise that timber-laced ramparts such as at Trusty's Hill were not merely an elaborate garden fence, but were designed with a significant defensive function. Encountering timber-laced stone ramparts during his conquest of Gaul, Julius Caesar remarked that these greatly hampered his legions; the relatively flexible internal timber-lacing serving to withstand their battering rams while the stone faces prevented the timber from being set alight (Wiseman & Wiseman 1980, 145). The defensive nature of the ramparts at Trusty's Hill are highlighted by other features. While the outer banks on the lower southern slopes of Trusty's Hill are less substantial, the 6 m wide rock-cut ditch and accompanying 3 m thick rampart on the northern side of the hill is much more daunting. This boundary together once posed an obstacle 9 m wide and at least 5 m high (see Chapter 2; Thomas 1961, 63). One might question its practicality as on its own it could be circumvented. But as a supplementary defence to the parapet of the timber-laced rampart around the summit above, which together with the naturally steep slope of the hill was probably another 5–6 m higher again, was a formidable barrier. Furthermore, the numerous slingstones recovered from the eastern side of the summit (see Chapter 4) indicate that it was not a passive form of defence that the inhabitants had in mind. As has been observed at other hillforts, the juxtaposition of slingstones with defences seemingly suited for their use is unlikely to be purely coincidental (Armit 2007, 33).

Notwithstanding its stout defensive qualities, there was nevertheless a significant and not altogether contradictory element of ostentatious display in the form of the wall constructed around the summit of Trusty's Hill. This is apparent in the ramparts and multiple roles of many such hillforts of the later prehistoric period (Bowden & McOmish 1987, 76; Hingley 1990, 96; Banks 2000, 273; Armit 2007, 36) and which no doubt continued to influence construction in the subsequent centuries of the early medieval period.

While the stone employed for the rampart was greywacke and was undoubtedly quarried from bedrock around the edge of the summit itself,

the construction of the rampart required copious amounts of timber, predominantly oak, which had to be brought to site. This implies considerable resources to hand, including not just the skilled labour and draught animals to fell and transport this material but substantial mixed woodland resources from which such timber could be extracted. As has been recognised elsewhere in Scotland (Tipping *et al.* 2006, 41), the control and conspicuous consumption of timber resources may have had as much to do with the exercise of power over local communities as the practicalities of constructing stout defences. One might observe the contrast between the relative ubiquity in the archaeological record of timber roundhouses in lowland Scotland throughout the Iron Age, which probably required long-term management of timber resources (Romankiewicz & Hunter 2013, 7) and the scarcity of settlement structures from the early medieval period, a divergence that may have begun as early as the third century AD, at least in eastern Scotland (Halliday 2006, 16). This may not only reflect the depletion of available timber resources following the peak in woodland clearance and agricultural activity evident across much of lowland Scotland during the latter centuries of the first millennium BC (Tipping 1997, 20–1; Armit & Ralston 1997, 192), but also the increasingly restricted control of timber resources in the hands of an elite. So, for example, the conspicuous use of timber to mark the royal Pictish site at Rhynie in Aberdeenshire (Noble *et al.* 2013, 1142) stands in stark contrast to low status forms of settlement in north-east Scotland, such as the early medieval Pitcarmick-type houses which were predominantly built of turf and stone (Carver *et al.* 2012, 184). Significantly, even where these survive in upland areas, they are extremely ephemeral in terms of their archaeological remains (Strachan & Sneddon 2012, 154). It might be observed that if these types of rectilinear houses, which yield no signs of material wealth, were the common form of architecture in lowland areas of south-west Scotland too, these would leave no archaeological visibility. This might explain the dearth of early medieval settlement in contrast to Iron Age settlement patterns even where land-use evidently persisted throughout the first millennium AD (Tipping 1997, 20–2). Where timber houses of modest status in south-west Scotland are encountered and that can be dated to between the fourth and sixth centuries AD, such as Whithorn or Dolphinton, these appear to have been light wattle or stake-walled rectilinear structures (Hill 1997, 70; Cook 2002, 77). Even the roundhouses enclosed within Buiston Crannog, which was interpreted as a wealthy farmer's settlement of the sixth century AD (Crone 2000, 165), were constructed of light wattle frames (*ibid.*, 162). This is in marked contrast to the

use of post in the much larger cruck-framed building at Mote of Mark (Laing & Longley 2006, 171) or the pre-Anglian hall at Lockerbie (Kirby 2011, 47–54) that are likely to have been high status halls of the same period, again reinforcing the notion that the control and conspicuous consumption of mature timber, along with other resources, was a mark of social elite status amongst the Britons during this time. Mature timber was of course employed for the substructure of the crannog at Buiston but it was observed that oak was not significantly used until Phase IV near the end of the sixth century AD hinting at social factors in the selective exploitation and employment of woodland resources outside the immediate environs of the crannog (Crone 2000, 163). As settlement architecture during the Iron Age may have intentionally reflected the status of a settlement's inhabitants (Banks 2002, 32), so too during the early medieval period may settlement architecture have been strictly controlled by social customs in addition to purely economic factors.

Of course, the ability to mobilise the workforce and resources required to construct the fort at Trusty's Hill implies control of a significant food surplus, as has been observed in relation to other major contemporary constructions in south-west Scotland (Crone 2000, 164). It may even be that the ostentatious display of agricultural wealth, particularly cattle, is manifested by the two outermost lower-lying enclosures that flank the south-eastern approach to the summit. The trench excavated in 1960 (Fig. 1.7) revealed no evidence of structures or occupation but simply a surface of weathered bedrock defined by an outer stone bank with an external revetment only, below a rock step to the north that was surmounted itself by a similar externally revetted stone bank (Thomas 1961, 61–2). There was none of the dark soil evident in this part of the site, which on the summit yielded numerous artefacts and environmental evidence for occupation. Furthermore, and unlike the enclosed area further upslope to the immediate west of the carved rock or the small enclosed terrace north-west of the summit which are both fully enclosed and may well have contained subsidiary buildings, the two outer terraces appear to have been open-sided to the south-eastern approach (Fig. 7.1). It therefore seems inherently plausible that their principal function was for corralling animals. While this no doubt served a prosaic function, keeping valuable and useful livestock at hand, ready for milking and shearing or butchering and consumption, it should also be borne in mind that this would make a significant measure of the agricultural wealth of the inhabitants readily apparent to anyone approaching the summit, which may have been deliberately intended as a very public expression of status, as envisaged at hillforts elsewhere (Waddell 2014, 142).

Further upslope, on the north-east side of the entranceway to the summit, the re-excavation of Trench 2 revealed not the guard-hut that Thomas proposed but instead a rock-cut basin that collected surface water, as Thomas himself noted (1960, 65–6). Its form and location, outside the central summit enclosure and at the entranceway opposite the Pictish carvings, indicates that its purpose was not simply as a functional source of water. As a relatively shallow basin, only 0.8 m deep and 2 m across, and with no natural spring at its base it was quite inadequate for supplying sufficient water for the everyday needs of the household at Trusty's Hill. Its location outside the protective timber-laced rampart above also left it in an exposed location at the entrance, the weakest point in any defensive circuit and probably the place most likely to be the focus of an assault on the fort. It certainly appears to have been accessed from the entranceway as the arrangement of rounded granite boulders and stones that defined the southern edge of the rock-cut basin led south-west towards the entranceway in the direction of the carved rock across on the other side (Fig. 2.3). The continuance of a dry-stone revetment around the basin's northern edge indicates a significant effort to maintain a defined space and implies a degree of formality to the structure. The evidence unfortunately does not indicate whether the basin was visible in the open air or was hidden from view by some structure. Both possibilities point to interesting symbolic gestures. At some point during the occupation of the hillfort, a stone banked horn-work was built across the arrangement of stones leading out towards the entranceway. Given that only the base of this horn-work survives, it is unclear whether this bank blocked access entirely or simply created a new opening through which access to the rock-cut basin was controlled.

Excavation of the primary waterlogged deposit within the rock-cut basin was undertaken in 2012 and while an element of contamination may have occurred when this deposit was previously exposed (see Chapter 5), it had been left largely unexcavated in 1960 (Thomas 1961, 66). There is therefore no reason to doubt the integrity of the large pieces of carbonised wood recovered from the basin's fill. The wood suggests that some form of wattle structure was present near the basin. Oak stakes and hazel poles may have provided uprights with hazel and willow woven between them (see Chapter 5). A fragment of hazel wood provided a calibrated AMS radiocarbon date of AD 661–773 indicating that this wattle structure may relate to the continued use of the rock-cut basin after the settlement on the summit of the hill had been destroyed. In fact significant effort would have been expended to clear out the rock-cut basin after the collapse of the vitrified rampart above. The find of silver coins recorded nearby to

the Pictish Carvings (Gordon 1794, 351), most likely from the rock-cut basin itself, might suggest that the reason for the continued use of this feature until as late as the sixteenth century was that it served as a place for votive offerings. It could well be that its existence and ritualistic significance even preceded the re-occupation of the site in the sixth century AD and originated during the earlier Iron Age occupation of the site. Certainly the horn-work overlying the revetment of the basin demonstrates that the basin predates this architectural demarcation. Despite the longevity of the hiatus between the Iron Age occupation of Trusty's Hill and its re-occupation in the early medieval period, it should be recognised that customs that owed more to Galloway's native Brittonic heritage than its latter Gaelic Norse veneer continued deep into the medieval period (Toolis 2004, 88). This is manifested, for instance, by the continued role of holy wells in Galloway (Morris & Morris 1982, 126–35), amongst other regions of Scotland, Britain and Ireland, that stem from earlier Iron Age customs and include examples such as St Queran's Well near Cargenbridge to the south-west of Dumfries, which yielded a comparable assemblage of coins to that recovered in the late eighteenth century from Trusty's Hill (Dudgeon 1892, 63; Stevenson 1988, 92; Barclay & Fojut 1990, 71; Gordon 1794, 351). Given that there is no reason stratigraphically why the rock-cut basin at Trusty's Hill could not have been originally created in the sixth century AD, if not during the initial occupation phase around 400 BC, traditions related directly to this feature may have continued on into the eighth century AD and beyond.

It is nevertheless impossible to know the precise function of the well at Trusty's Hill during the sixth century. On analogy with Dunadd in Argyll we can suggest its use perhaps in anointing. A clear parallel can also be drawn with the well at the Pictish fort of Burghead in Moray, which appears to have positioned close to the line of the great rampart of the fort (Feachem 1977, 139). Here, the covered well was found to contain a number of early medieval and post-medieval objects when opened in the early nineteenth century. This assemblage included two slabs, one with a Pictish bull and one with a cross and knot-work, a bell metal jug and a number of Spanish coins (Ordnance Survey 1870, 19). It may also have contained a Celtic head (Foster & Cross 2005, 44, fig. 23). As a significant feature with undoubtedly symbolic meaning that attracted votive offerings, the Burghead well's biography continued long after the Pictish fort's occupation.

The ceremonial nature of this part of the approach to the summit is further supported by the inscribed stone on the opposite south-west side of the entranceway from the basin (Fig. 7.1). While the cultural context, origin and connotations of the carved symbols at

Trusty's Hill (see Chapter 6) will be discussed in further detail below, it is important to state that the symbols are genuine, and the 2012 excavations have provided contextual evidence that firmly supports a late sixth or early seventh century date for these. Since the destruction of the timber-laced rampart around the summit resulted in the utter collapse of the gateway, which is now lost amongst a spread of collapsed rubble, it is unlikely that the elaboration of the entranceway as represented by the horn-work was built after the summit rampart was destroyed. There was simply no entrance or indeed hilltop citadel to elaborate an approach to. On balance it is therefore likely that both the rock-cut basin and carved symbols can be tied to the occupation of the summit during the late sixth or early seventh century. These provided focus to the entranceway in much the same way as the combination of rock-cut basin and a Pictish inscribed rock face at the entranceway to the summit citadel of Dunadd (Lane & Campbell 2000, 13). The combination of the carvings and the rock-cut basin, facing each other, indicates that the approach to the summit at Trusty's Hill passed through a symbolically charged entranceway where the duelling of inscribed images on the rock face was mirrored in the features of inscribed stone and basin. The ritualised entranceways to the summit citadels at both Trusty's Hill and Dunadd recalls the complex entranceways apparent in many earlier Iron Age hillforts that appear to emphasise a literal rite of passage between the outside world and the interior of a hillfort (Bowden 2006, 433).

Trusty's Hill: a nuclear fort

Nuclear forts were a type of elite secular settlement that emerged in Scotland during the early medieval period. They can be defined as a fortified citadel on the summit of a craggy hill, which formed the nucleus, around which were a number of lesser enclosures looping out from the summit along lower lying terraces and crags of the hill (Stevenson 1949, 190–1; Alcock *et al.* 1989, 206). While the plans of individual nuclear forts may differ according to the rocky topography of the individual sites, such as, for instance, the number of lesser enclosures; what matters in distinguishing these hillforts from their Iron Age predecessors is the hierarchical organisation of space (Alcock *et al.* 1989, 211). Trusty's Hill recognisably conforms to the definition above of a nuclear fort and the evidence gathered from the 2012 survey and excavation confirms what has long been tentatively suggested (Thomas 1961, 67; Harding 2004, 209) and allows more confident comparisons to be made with the contemporary early medieval nuclear fort at Dunadd in Argyll (Fig. 7.2).

Dunadd is probably the best understood nuclear fort in Scotland. Like Trusty's Hill, Dunadd developed from an earlier Iron Age settlement first occupied around the fourth or third centuries BC. It is unclear whether there was a hiatus between the later occupation of the site around the turn of the first millennia BC/AD and the creation of a summit dun in the fourth or fifth centuries AD (Lane & Campbell 2000, 89–92). However, by the sixth or seventh centuries AD other enclosures had been added to the summit enclosure to create a nucleated fort which appears to have been continuously inhabited until the ninth century, and perhaps sporadically thereafter (Lane & Campbell 2000, 97). Other nuclear forts demonstrate similarities to this chronology. The timber-laced ramparts that defined the summit citadel and surrounding wider enclosure at Clatchard Craig in Fife appeared to have been built no earlier than the sixth or seventh century AD, though some of the finds may indicate a prior Iron Age settlement (Close-Brooks 1986, 149). Occupation of Dundurn in Perthshire, on the other hand, appears to have only begun during the seventh century AD with the settlement not assuming the character of a nuclear fort until the eighth century (Alcock *et al.* 1989, 204–6). Likewise the occupation of Dumbarton Rock, another craggy hill that lends itself to a hierarchical organisation of space, appears to have begun no earlier than the late fifth century AD but with timber-laced fortification not apparent until perhaps the late sixth century (Alcock & Alcock 1990, 112–16). Edinburgh Castle Rock, while not demonstrated as such, nevertheless occupies a suitable setting for a nuclear fort and has yielded plentiful evidence for the continuity of a high status settlement between the Iron Age and the fifth–seventh centuries AD and beyond (Driscoll & Yeoman 1997, 29, 43–5 & 228). Likewise Bamburgh Castle Rock in Northumberland, again another potential contender for a nucleated fort, appears to have been continuously occupied since the pre-Roman Iron Age prior to it becoming the principal stronghold of the kingdom of Bernicia (Hope-Taylor 1977, 292 & 370). The results from excavations of a variety of enclosed settlements in Strathdon in Aberdeenshire indicate a spate of construction in both entirely new sites and previously occupied Iron Age hillforts between the late fourth and mid-seventh centuries AD with occupation of only a selection of the larger forts continuing into the eighth century (Cook 2011, 216–18; Noble *et al.* 2013, 1143).

The radiocarbon dates from Trusty's Hill demonstrate a comparable sequence of re-occupation and fortification of the site over the course of the sixth century AD. This reflects wider social trends apparent across northern Britain and indeed other peripheral areas of the Roman Empire around the middle of the first millennium (Noble *et al.* 2013, 1144–5),

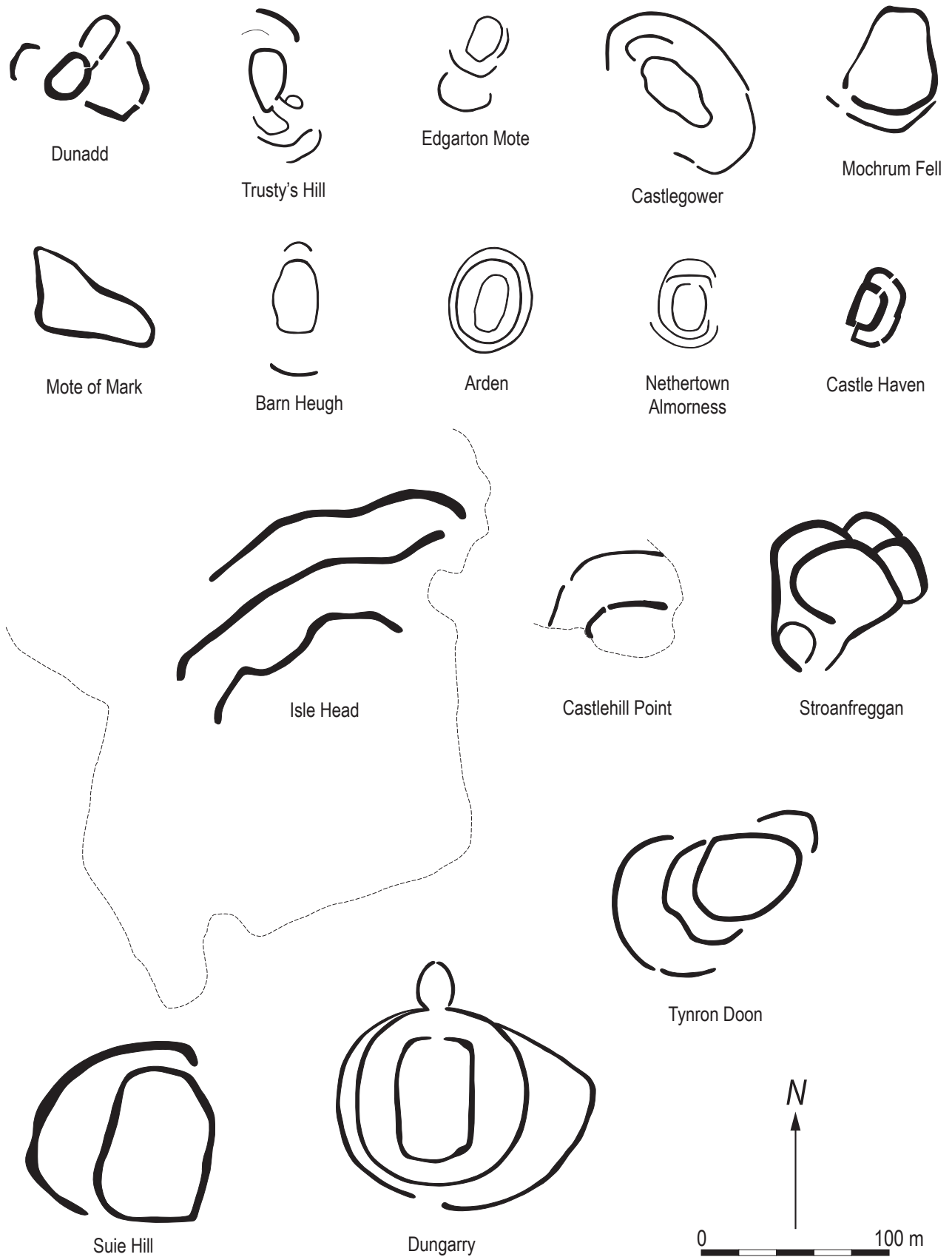


Fig. 7.2. Comparative plans of the late sixth–early seventh century phases of the nucleated forts at Dunadd and Trusty's Hill, together with comparative plans of courtyard, nucleated and other potential early medieval forts in Galloway

though interestingly while comparable hierarchically-organised fort layouts to those in Scotland are apparent in Northern Wales and Continental Europe, there are none in southern Britain (Alcock *et al.* 1989, 211–13). Trusty's Hill is significant because it may preserve the arrested development of an early version of a nucleated fort in Scotland, specifically that of a nucleated fort that did not develop over the course of the seventh and eighth centuries. So while it may appear diminutive now to the fully developed early medieval nucleated forts at Dunadd or Dundurn, it may not have been so during the late sixth–early seventh centuries (Fig. 7.2).

However, even given Trusty's Hill's relatively short span of development over the sixth and early seventh centuries, culminating in the construction of the summit ramparts around the late sixth century, it is apparent that there were several sub-phases of building during this time. This is best illustrated where the horn-work overlies part of the stonework enclosing the rock-cut basin. While largely unexamined in 2012, the outer ramparts likely represent a piecemeal development of the site subsequent to the construction of the summit rampart. This steady drive to develop or improve the fort over time is directly comparable to Dunadd and Dundurn. It is impossible to know the sequence of construction given the present evidence. The lower enclosures and northern rock-cut ditch may post-date the construction of the timber-laced rampart, or it may equally be the case that some of the outer banks and features originated during the initial re-occupation of the hill in the sixth century. It is equally unknown what features existed on the summit prior to quarrying and construction of the timber-laced rampart. Were earlier Iron Age ramparts apparent? Were these embellished in some way during the initial re-occupation of the site.

It is unlikely that any of the visible ramparts or banks derive from the Iron Age occupation of the hill. Thomas' sequence of two widely separate phases of fortification is unconvincing. Thomas attributed the northern rock cut ditch to the initial Iron Age occupation but this is questionable given the deposition of sediments seen in the published section drawing of the feature (1961, 67; Fig. 1.10). By analogy with ditch sections examined during earthwork experiments at Wareham (Evans & Limbrey 1974, 178) and Overton Down (Bell *et al.* 1996, 234–5), and similar results recovered from the boundary ditch of the Iron Age promontory fort at Carghidown in the Machars of Galloway (Fouracre 2007, 294–6), the very shallow depth of primary ditch fill evident in Thomas' sections suggests that Trusty's Hill's rock-cut ditch was open for no more than a year or two before the revetted stone bank above had collapsed into it. There were no signs of subsequent re-cutting

of the ditch. This is more consistent with the ditch being linked with the short single phase of early medieval occupation. It is probable that this and the additional enclosing works were added to the fort during the narrow period during the late sixth century when the summit rampart was constructed and the early seventh century when the summit rampart was destroyed. Given the comprehensive destruction of the summit rampart it is unlikely that the outer ramparts, enclosures or ditch were constructed after this. The layout of the ramparts and outer banks is rather more convincing as a unitary system of fortification of the site, albeit one that developed over some years.

While Trusty's Hill's nuclear layout should be viewed in the context of other similar high status settlements in early medieval Scotland, it is possible that the form and layout of Trusty's Hill is also related to a local group of 'courtyard forts', including Nethertown of Almorness, Dungarry and Suie Hill, in the southern Stewartry district of Galloway (Truckell 1963, 94–5; Fig. 7.2). At both Dungarry and Suie Hill, dry-stone ramparts form an oblong enclosure around each summit while lower-lying dry-stone outworks enclose at least one flank of each hill (Coles 1891, 395; 1892, 118). The summit of Nethertown of Almorness is also enclosed by an oblong stone rampart while stone and earth outworks, not concentric to the summit rampart, enclose lower-lying terraces of varying breadth with a particularly wide terrace enclosure apparent on the northern side (Coles 1892, 129). Another comparable site to Suie Hill, Dungarry and Trusty's Hill is Stroanfreghan hillfort which lies in the northern area of the Stewartry district. This comprises a circular dry-stone summit enclosure associated with a number of separate dry-stone outworks enclosing lower-lying terraces and flanks (Coles 1892, 166–7; Feachem 1977, 131). These are not the only forts in the Stewartry district of Galloway where comparisons have been made with Trusty's Hill (Feachem 1977, 129–31; see Fig. 7.2). A few miles to the east and south-east of the Fleet Valley lie the hillforts of Arden and Barn Heugh which both comprise oval summits enclosed by dry-stone ramparts accompanied by lower-lying outworks (Coles 1893, 133 & 145). Whether any of these unexcavated forts are contemporary with or precede Trusty's Hill remains to be discovered. It is possible that, like the spate of hillforts that emerged in Strathdon in Aberdeenshire between *c.* AD 400 and 650 (Cook 2011, 216–18), a comparable pattern of high status fortified settlements emerged in Galloway, and particularly the Stewartry district of Galloway, in the immediate post-Roman centuries.

There are certainly a number of vitrified forts in the Stewartry that share strong resemblances with Trusty's Hill (Feachem 1977, 129–30; Fig. 7.2).

While timber-laced forts, or vitrified forts as they are often recognised in the archaeological record, are not culturally or chronologically distinct – being distributed widely across Europe from as early as the eighth century BC (Mackie 1976, 209–10; Ralston 2006, 143) – they are not so common in Dumfries & Galloway. Richard Feachem identified eight amongst a group of 26 sub-rectangular forts distributed across Galloway (1966, 76), though only six, including Trusty's Hill, were identified by Ewan Mackie along with a further two in Dumfriesshire (1976, 233–5). These south-west forts were described as one of three geographically distinct groups in Scotland (*ibid.*, 222 & 444). The four vitrified forts within the Stewartry other than Trusty's Hill, appear to be very similar morphologically. Edgarton Mote and Castlegower both comprise small fortified summits with lower-lying enclosures and terraces, with Edgarton also cut off from the ridge to the north and south by rock-cut ditches of similar proportions to that at Trusty's Hill (RCAHMS 1914, 35–6 & 60–1). The fort at Mochrum Fell similarly comprises a fortified summit of a prominent knoll with a lower-lying outwork. At all three of these sites it appears that it was only the summit rampart that was vitrified, as is apparent at Trusty's Hill, indicating that timber-laced stone ramparts only enclosed the prominent hill tops. While the Mote of Mark has no apparent outworks, it is not too dissimilar to these other forts in that its single timber-laced rampart forms an irregular oval enclosure around the summit of a small rocky knoll (Laing & Longley 2006, 2; Fig. 7.2). As this is the only other vitrified fort in Galloway to have been excavated, and which yielded evidence again for occupation in the sixth and seventh centuries AD (Laing & Longley 2006, 24), this suggests that the other vitrified forts in the area may be of a similar age and status to both Mote of Mark and Trusty's Hill. Mote of Mark was described by the excavators as the workshop and home base of a master craftsman of high status (*ibid.*, 174), and further excavation of the other vitrified forts may yield more clues to early medieval social differentiation in the Stewartry district of Galloway.

Just out with Galloway, the hillfort at Tynron Doon in upper Nithsdale, from which there is some evidence of vitrification and occupation around the sixth–eighth centuries AD, also comprises a fortified summit of a prominent peak with lower-lying outworks (Williams 1971, 107; Fig. 7.2). However, almost all the other vitrified forts in Dumfries & Galloway, Doon of May in Wigtownshire, and Mullach and Kemp's Castle in Nithsdale, are very dissimilar in form to the vitrified forts of the Stewartry and to each other (RCAHMS 1912, 76; 1920, 122–3 & 193) and there is therefore no reason to believe that these had the same functions or date to the same

period. The only other known vitrified fort in the region is Castle O'er in Eskdale, East Dumfriesshire, which interestingly does resemble the courtyard forts of Suie Hill and Dungarry albeit as a much larger settlement and demonstrably comprising multiple households (RCAHMS 1997, 80). Castle O'er appears to have been constructed in the third or fourth century AD before being vitrified and destroyed at some point before the end of the fifth century (Roger Mercer, *pers. comm.*). This again offers further comparable evidence in south-west Scotland to contemporary settlement trends in parts of north-east Scotland (Cook 2011, 216–18). A general comparison can also be drawn with the sporadic distribution of vitrified forts in Ayrshire and Renfrewshire. Included in this list are Kildoon Hill, which has been observed to closely resemble Trusty's Hill (Childe & Graham 1943, 39; RCAHMS 1953), and the dissimilar fort at Craigmarloch that probably dates to the first millennium BC (Nisbet 1996, 56–7).

While there are few direct Iron Age antecedents for timber-laced stone ramparts in Dumfries & Galloway, there are numerous antecedents for exotic architecture as a form of ostentatious display. Most notably there is the scatter of brochs and duns across the west of the region which reflect the wider architectural trends of Atlantic Scotland but with a local twist (Cavers 2008, 15–16). The closest of these Atlantic style structures, Castle Haven, lies on the coast only a few miles to the south-east of Trusty's Hill and comprises a D-shaped galleried dun that might have ranged in date from the Iron Age into the early medieval period (Barbour 1907, 71; Cavers 2008, 18; Alcock *et al.* 1989, 209; Cessford 1994a, 73–4; Alcock 2003, 187; Laing & Longley 2006, 165). It is therefore possible that the timber-laced stone rampart atop Trusty's Hill both reflected the Iron Age trends in Galloway of adopting atypical architecture for the ostentatious display of power, wealth and cultural sophistication, but also emerging architectural trends of nuclear fort building shared with the north. In doing so, the early medieval household at Trusty's Hill was marking itself out both as a successor to those who inhabited the landscape in the past and as intimately connected with the highest status households of northern Britain at the time.

This is exemplified in the way socially constructed memories and traditions may have governed the choice of location for early medieval centres where material culture was crafted to project strong identities. Sites with signs of previous Iron Age occupation, such as Trusty's Hill, or Dunadd in Argyll, Clatchard Craig in Fife, Dinas Powys in south Wales, or Cadbury Castle and Cadbury Congresbury, both in Somerset, may have been deliberately re-occupied by emergent ruling elites in the fifth and sixth centuries AD, albeit with contemporary architecture (Bowles 2007, 67–8). In fact, given the less than prominent

location of Trusty's Hill within the surrounding landscape, in marked contrast to other early medieval strongholds such as Dunadd, Edinburgh Castle Rock and Dumbarton Rock, it is difficult to imagine the reason for establishing such a high status settlement here other than one that drew on earlier traditions related to the site. It may be that the previous Iron Age occupation of Trusty's Hill had garnered such an illustrious and embellished reputation over the intervening centuries that the appropriation of this hilltop at some point in the sixth century enhanced the legitimacy of the new household over the landscape 'of their ancestors'. Indeed, the potential relationship between Trusty's Hill and the monastic settlement at Ardwall Isle (discussed further below), mirrored by the pairing of other early medieval royal and monastic sites such as Bamburgh and Lindisfarne, has regional Iron Age antecedents in the pairing of the hillfort at Castle O'er and the nearby ritual site at Over Rig (RCAHMS 1997, 78–85). These latter two sites, moreover, lie within a settlement pattern that suggests Iron Age origins to the medieval estate structure of Dumfriesshire (Halliday 2002, 102–3).

The longevity of social memory in the later prehistoric and early medieval eras is increasingly recognised (Driscoll 2011, 264), in instances such as the re-occupation of Traprain Law in East Lothian in the Roman Iron Age, which may have drawn on the memories, myths and legends of the site that had accrued since its abandonment in the Late Bronze Age (Armit & McKenzie 2013, 512). The overt and underlying symbolism of reconnecting with a distant, even mythical, history, but in a socially relevant way, probably allowed the occupants of a hillfort to assert authority through physical associations with a collective past (Harding 2012, 290). In northern Britain, at sites like Trusty's Hill and Dunadd, the greatest natural and human resources seem to have gone into creating new and imposing enclosures on hilltop summits that mimicked earlier Iron Age fortifications. Perhaps this was to emphasise to an external audience the strength, connectedness and legitimacy of both past and current households.

Internally, however, we are left with many questions about the nature of the architecture at these sites, with scant evidence for the timber post-built structures within. Indeed, the internal architecture of these places may have been more ephemeral, perhaps owing to a peripatetic ruling class and their craftspeople only occasionally occupying the space (Clarke 2012, 87 & 103). Regardless, there was clearly an intention at these sites to externally project a sense of enduring power, strength and identity based in a shared sense of collective memory and identity. To cement the strong associations of people with place, sites such as Trusty's Hill and Dunadd were actively ritualised with meaningful symbols of authority such

as the rock-cut basins and carvings in prominent locations. Indeed, people may have assembled at these places to conduct various public acts regardless if the household was actually in residence or not.

The hillfort economy and culture

Arable agriculture

Control over local agricultural surplus lay at the heart of Trusty's Hill's economy. The surplus both sustained its household and allowed it to accumulate greater wealth and prestige through its redistribution. Susan Ramsay's analysis of the limited archaeobotanical assemblage yields insight into local cereal production, and its consumption at Trusty's Hill (see Chapter 5). Barley was the dominant grain, with oats found in trace amounts. This pattern of charred barley and oats, albeit often in much greater quantities, is attested on early medieval sites elsewhere in Scotland (Alcock 2003, 111). The predominance of barley, supplemented by oats, conforms closely to cereal assemblages from near contemporary settlements elsewhere such as Lockerbie (Hastie 2011, 51), Edinburgh Castle (Boardman & Ramsay 1997, 195), Dundonald Castle (Holden 2004, 115–17), Dunadd (Milles 2000, 221–6), Easter Kinnear (Dickson 1997, 107–12) and Hoddum (Holden 2006, 109–13). Ramsay argues that the lack of a comprehensive cereal assemblage from the site could be the result of low level domestic activity, the absence of food processing on the summit, that the site was only intermittently occupied or that the carbonised grains were residual from earlier phases of occupation. However, another possibility for the small assemblage could be the result of regular house-keeping of the summit structures and clearance into currently unidentified middens. While any of these are certainly possibilities, the charred grains were found within dark soil contexts dated to the early medieval occupation making it unlikely that they come from earlier contexts, and their carbonisation suggests cooking nearby within the sixth and early seventh centuries. The recovery in 1960 of the lower half of a granite rotary quern from Trench 4 also implies grain processing on site contemporary with these early medieval occupation deposits (Thomas 1961, 63).

It has been suggested that the large number of quern stones at Dunadd, and possibly Loch Glashan, resulted from the collection of these from a local populace forced to use water mills, based on comparisons with contemporary evidence from Ireland (Lane & Campbell 2000, 237). However, it is more likely in the case of Trusty's Hill that its household controlled the collection of grain renders from bonded farmers, and the consumption and

redistribution of grain in much the same way as it did for other resources. Water milling in the Fleet is certainly conceivable, but there is no evidence that sites such as Dunadd, Trusty's Hill or the Mote of Mark were directly engaged in farming activities. For example, none have produced plough pebbles similar to those encountered at Whithorn (Hill & Nicholson 1997, 464–6), which indicate the use of mouldboard ploughs in Galloway as early as the sixth century AD (Hill & Kucharski 1990, 81–2). Together with the presence of millstones (Chadburn *et al.* 1997, 460), it is clear that the monastic settlement at Whithorn was engaged in cultivation and processing of grain for its own needs and possibly redistribution as well. The comparative lack of evidence for farming is matched in the small and poorly preserved grain assemblage from the occupation deposits at Trusty's Hill which yielded no positive evidence for local crop regimes, such as associated chaff or weed seed contaminants, that might reveal harvesting or processing methods as demonstrated at Dunadd or Garvald in South Lanarkshire (Milles 2000, 221–6; Rankin 2002, 73–4). It is interesting to note, however, that wheat, often seen as an early medieval high status import (Dickson & Dickson 2000), was not present in the cereal assemblage as identified, albeit in minuscule quantities, at other near contemporary sites in Scotland such as Lockerbie and Edinburgh Castle (Hastie 2011, 50–1; Boardman & Ramsay 1997, 191–9). Its absence at Trusty's Hill, just as at Dunadd during the same period (Milles 2000, 221), suggests that there was no desire to import or grow wheat locally.

It is unlikely that the rocky and boggy Boreland Hills in which Trusty's Hill lies provided adequate farmland for growing barley and oats. Modern land capability studies for Scotland, while not directly representative of past climate or agricultural practice, nevertheless show that the land to the west of the Fleet is typically unsuitable for crops and, while some areas will support grasslands, the area is predominately valuable for rough grazing only (Birnie *et al.* 2010). Crops were more likely to be grown in the well-drained land of the Fleet Valley, such as the fields around Girthon which conform to the Macauley Institutes' class 3.1 of soils suited to mixed agriculture (*ibid.*). The lack of identifiable agricultural implements in the artefact assemblage and of a larger cereals assemblage, combined with the limited evidence for food processing, point to the household at Trusty's Hill receiving and processing harvested grains rather than practising agricultural activities themselves. This is consistent with other higher status early medieval settlements in Scotland where it can be surmised that the occupants, engaged principally in high status craft activities, controlled but did not engage in local farming (Alcock 1988, 26–7). The excavations at Hoddum concluded that

the high status monastic settlement benefited from the control of an organised arable economy, with the site receiving surplus 'clean' grain for storage and processing (Mills 2006, 145). An agricultural estate controlled from Hoddum is implied by the large variety of grain and weed seeds that seem to come from a considerable hinterland (*ibid.*). A similar arrangement is suggested for Trusty's Hill. It is not possible, at present, to suggest where Trusty's Hill's dependent farming communities existed in the Fleet Valley. However, there were probably a number of sites along the valley similar to the early medieval farmsteads at Garvald (Cook 2002, 78), with activities ranging from cultivation to wool production in the context of owing renders to the household at Trusty's Hill. The recently excavated settlement at Lockerbie, which may have originated as a pre-Anglian native British hall (Kirby 2011, 43–54), provides another regional example of a farming settlement in this period.

Among the non-cereal seed remains, there are several notable species present. First are the raspberry and bramble seeds in the waterlogged deposits from the rock-cut basin. While these could be the result of berry collection by Trusty's Hill's inhabitants, it is possible that they represent naturally occurring plants near the basin in the centuries following the site's abandonment, or modern contamination from Thomas' 'soupy mud' at the base of his Trench 2 excavations (see Chapter 5). However, both raspberry and bramble are known from Dundurn and late Iron Age contexts at Edinburgh Castle (Alcock *et al.* 1989, 222; Boardman & Ramsay 1997, 194). Furthermore, given the quantity and frequent occurrence of hazelnut shells throughout the occupation deposits, it can be observed that not only was hazelnut, as a rich source of protein and fibre, probably a dietary staple, but also that the gathering of wild plants was practised, which suggests that the raspberry and bramble remains also plausibly derive from the early medieval occupation of the site.

Animal husbandry

As with the plant remains, the animal bone assemblage from Trusty's Hill was limited by poor preservation and the small scale of the excavations (see Chapter 5). Nevertheless, Karen Deighton's analysis indicates that animal husbandry and consumption at Trusty's Hill conforms to a pattern witnessed at other contemporary high status sites in western Britain and Ireland and which implies the control of significant animal capital. The dominant taxa within the summit deposits at Trusty's Hill was cattle at almost 69% of the total identified taxa, with pig coming second at 20%, sheep or goat at 10% and horse at around 1% (see Table 5.3). The impression given by the assemblage

is a meat diet based primarily on cattle and pig, with some sheep or goat. While the horse may have been eaten at Trusty's Hill, it more likely represents the remains of an animal primarily used either for riding or as a pack animal.

The predominance of cattle in early medieval animal bone assemblages is well established (Alcock 2003, 112–14). Sites such as Dundurn and Dunollie produced very high percentages with over 60% of the total in both cases (*ibid.*, table 4). At Whithorn, cattle made up almost 80% of the meat consumed before the medieval period (McCormick & Murphy 1997, 605). This accords well with the evidence from Dunadd where 76% of the assemblage came from cattle, while sheep (12%) and pig (10%) made up most of the rest (Noddle 2000, table 6.5). The considerable animal bone assemblage from the Mote of Mark also showed cattle vastly predominating at nearly 75%, with pig at over 16% and sheep or goat at 9% of the total (Bourdillon 2006, table 20). These closely compare with Trusty's Hill in that cattle far outweighs the other species, consistently comprising around three quarters of the overall assemblages. However, the Trusty's Hill assemblage was fragmentary, poorly preserved and likely suffered from the incorporation of 'a large quantity' of unrecovered bones in the 1960 backfill where they would have been more prone to further fragmentation than in situ samples (Thomas 1961, 63). Unfortunately, the quality of the assemblage precluded identification of age ratios, slaughter patterns and cooking practices.

Nevertheless, Trusty's Hill broadly conforms to our understanding of high status animal consumption in Scotland where it is widely believed that cattle herds were an important symbol of wealth and prestige (Alcock 2003, 114). Much of the discussion of cattle herds in Scotland rests on assuming archaeological parallels with early medieval Irish legal texts. In Ireland, the status of an individual was intimately tied to the number of cattle he possessed or rented from a lord (Edwards 1996, 56–7). Cattle were used to bond men through rent and gift, with the meat, dairy and hides returning to a lord through render (Alcock 2003, 114). The productive longevity of a cow or bull, and the ability to use this as a basis for cementing long term client relationships, allowed cattle to become a kind of currency, and herds a form of banking. But it was the bonding relationship through the gift of a cow that was of prime importance rather than simply the accumulation of wealth (Doherty 1980, 73). The cattle were mainly kept for dairy with heifers being allowed to mature and the surplus younger animals killed for their meat (Edwards 1996, 57). The wealth represented by cattle herds required careful management and protection, especially if cattle raiding was as important as the poetry of the era suggests, with one of the northern kings, Urien of Rheged,

celebrated as a 'raucous cattle-raider' with 'herds of cattle surround[ing] him' (Clancy 1998, 84 & 87).

As the second largest element in the animal bone assemblage, the incidence of pig is another commonality shared with other high status sites in Scotland. Pigs provide a sustainable source of meat with sows producing up to several litters of five or more piglets a year (Alcock 2003, 113). Thus, while a single cow will produce a greater carcass weight, a sow will produce a ready supply of meat throughout a year. However, the smaller and softer pig bones are more prone to fracturing and disintegration than cattle which suggests that the assemblage percentages of Trusty's Hill and other contemporary settlements may substantially under-represent the actual proportions of meat consumed (Alcock 2003, 112). While meat was probably the primary pig product, the hides and fat were also likely utilised.

Sheep or goat (it is often impossible to distinguish the two) were also represented in the Trusty's Hill assemblage and while these were clearly a source of meat, the relatively low percentage of animal bones in the Trusty's Hill assemblage may reflect a hesitancy to consume sheep, with a preference for their wool and perhaps dairy produce. Wool production and textile manufacture at Trusty's Hill is demonstrated by the single spindle whorl. Wool may have been sheared on site, or brought in bales. Beyond this, the limited evidence from Trusty's Hill shows that either mutton or lamb was consumed by the household, but in more limited quantities than the other domesticates.

It is likely that the animals consumed and processed at Trusty's Hill were brought to site on the hoof. The splintering apparent on the bones, resulting from heavy handed butchery practice, does not suggest delicate food preparation but rather the swift separation of meat into either single portions or for inclusion in stews. However as Karen Deighton points out, post-deposition processes such as animal scavenging may have resulted in a preservation bias (see Chapter 5). The apparent treatment of scraps also implies a certain casualness to the food consumed on site. Deighton suggests that the bones from consumed meat were thrown into open middens where dogs or foxes could readily eat them. Indeed, the level of canid marks on the bones may indicate that throwing bones to dogs, or allowing them to root through middens, was a regular occurrence. If open middens did exist on the site they may have served as a practical resource. Deighton draws our attention to the heavily burnt and calcined bones from Trusty's Hill and the analogy with Dunadd where bones were perhaps utilised as a supply of fuel for metalworking or keeping fires lit overnight (Wysocki 2000, 229). However, given the high heat involved in calcining bones (temperatures above 1000°C), and the incidence of bone from within rampart contexts in Trench 4, it

seems likely that at least some of the bone was burnt during the destruction of the summit rampart.

The rare evidence for horse, possibly from a single skull, at Trusty's Hill is an interesting inclusion. The likelihood is that this animal was used for riding rather than food. Horses were highly valued in early medieval society, not simply for their practical uses whether in transport, hunting, warfare or farming, but also as gifts within the patronage system. Horses frequently occur as a symbol of military prowess in the poetry of the time (Clancy 1998, 82, 86 & 87). This accords well with the evidence from Ireland and elsewhere where horses appear to have been bred especially as mobile high status symbols that were richly adorned when ridden (Edwards 1996, 59). Indeed, the gilded horse mount from Trusty's Hill is best viewed as a fragment of horse gear indicating at least the presence of high status tackle on the site. As with the cattle, pigs, sheep or goats, horses pasturing around Trusty's Hill may have added to the visible wealth of the household.

Equally important to the presence of certain species in the Trusty's Hill faunal assemblage is the absence of other species. The 2012 excavations did not provide evidence of wild fauna, birds, fish or seafood. The lack of fish or seafood in particular is surprising given the site's proximity to the River Fleet and the Solway. The assiduous sieving on site and in the laboratory meant that smaller bones, or even fish scale, would have been recognized if present, so the absence of these should be considered as genuine. Indeed, a similar lack of fish was noted at the Mote of Mark, another coastal secular settlement (Bourdillon 2006, 140–1). This is not the case at Whithorn where a variety of fish remains were encountered in all phases, though only a few from the pre-eighth century period (Hamilton-Dyer 1997, 602). It is therefore likely that fish was excluded from the diet in high status secular households during this period, though it was consumed, albeit in modest amounts, in contemporary Christian monastic settlements. The lack of bird or wild game bones is another interesting absence. A couple of bones from a domestic fowl, a single bone from a white-tailed eagle and a bone from a roe deer were recovered from the Mote of Mark (Bourdillon 2006, 139–41), while no bird bones, and only a rather modest assemblage of red deer and roe deer bones, were recovered from pre-eighth century Whithorn (Hamilton-Dyer 1997, 604; McCormick & Murphy 1997, 611). This indicates that wild game played only an incidental role in the diet of early medieval communities in south-west Scotland. In fact the apparent diet at Trusty's Hill adheres closely to prevalent British diets during the Iron Age, which were dominated by the consumption of cattle, sheep/goats and pigs and barley and which largely excluded non-domesticated resources (Jay & Richards 2007, 187).

Textile production

The single cultivated flax seed from the primary fill of the rock-cut basin is significant because it is likely to represent early medieval flax processing on the site. Flax as a source of linen, oil and food, is known from other early medieval sites such as Buiston Crannog and Edinburgh Castle (Holden & Boardman 2000, 152; Boardman & Ramsay 1997, 191). The flax at Trusty's Hill suggests demand for non-cereal botanical resources in the wider landscape, while cattle and sheep may have not only provided dairy products and meat, but also hide, wool and bone to be used in domestic textile production. Woollen textile manufacture is clearly demonstrated by the single spindle whorl recovered from the western side of the summit (Fig. 4.19). Producing textiles, whether in linen, wool or leather, is also the likeliest explanation for the purpose of the three-toothed socketed iron tool from Trench 5 and the stone polishers or burnishers in the artefact assemblage (see Chapter 4). These items suggest that the household at Trusty's Hill was engaged in the production of textiles and it is probable that the finished products, as with the metalwork discussed below, were finely crafted with an added status granted by virtue of their place of origin. The leather working may even have complemented the metalworking, with combined leather and metal objects being produced in the workshop here.

Woodland management

The evidence recovered in 2012 clearly indicates that a tightly controlled and sustainable supply of wood was needed for the construction and repair of structures, fuel for craft manufacture, cooking, heat, and as a supply of supplementary foods such as hazelnuts. Oak and hazel predominated the charcoal assemblage, with a significant ash contribution. The majority of oak, hazel and ash charcoal came from features and deposits closely associated with the ramparts on both sides of the summit. Susan Ramsay concludes that this reflects the burning of structural timbers and wattle (see Chapter 5). As discussed above, much of this came from a significant timber framework within the rampart core, and very likely a superstructure above. The assemblage may also include timbers and wattle from dismantled structures in the interior of the site used as fuel to destroy the rampart. But given the scale of vitrification around the summit, additional fuel was undoubtedly required to maintain the intensity of the rampart's destruction over a lengthy period of time. The considerable fuel resource needed to vitrify stone on the scale of the Trusty's Hill rampart is unlikely to have been met by the wood found in the site's structures alone and so felling trees and transporting these from a nearby woodland is likely.

In addition to the oak, hazel and ash samples, smaller quantities of other species perhaps indicate fuel for domestic and industrial fires. These include alder, birch, cherry and willow. Despite these being found in dark soil deposits, Ramsay indicates the small percentages do not adequately represent domestic activities on site. It is probable, as Ramsay notes, that the domestic evidence at Trusty's Hill remains in unexcavated middens or pits elsewhere on site.

The species of wood utilised at Trusty's Hill was broadly similar to that at other early medieval sites. Similar assemblages, comprised principally of oak and hazel, and supplemented by other species, are known from Hoddum (Crone 2006, 148–50), Whithorn (Crone 1997, 596–8), Buiston Crannog (Brunning 2000, 84–9), Dunadd (Boyd 2000, 229), Dumbarton Rock (Alcock & Alcock 1990, 110) and Dundurn (Alcock *et al.* 1989, 196). While accepting that there are interpretive difficulties with all of these assemblages, particularly when suggesting woodland management (Crone 2006, 148), it is unlikely that all of these sites relied on ancient and semi-natural woodland as a source of sustainable timber over long periods of time. The evidence instead indicates a secure, managed and sustainable woodland somewhere near Trusty's Hill. There is little in either the archaeological or historical record to suggest the survival of managed woodland into the medieval period in south-west Scotland, though John Gilbert points to the place-name *Hardgrafe* (modern Hardgrove between Kinmount and Dalton, Dumfriesshire) as indicative of seventh century Anglian incomers to the region recognising existing coppiced woodland (2012, 110). The presence of oak throughout the timber-framed rampart encircling the summit of Trusty's Hill certainly suggests a ready and large supply of mature woodland in the sixth century AD. It is likely that the structures occupying the summit citadel were also built with oak and ash, as well as probably hazel roundwood for wattling. Altogether, the scale of construction evident at Trusty's Hill indicates control of substantial mixed woodland, dominated by oak, and likely managed through careful coppicing or pollarding. It may be that this woodland was also utilised as a source for specialised woodworking. Susan Ramsay suggested the carbonised yew fragments from Trusty's Hill may have come from a bucket or bowl (see Chapter 5), and the lack of native pottery from the site suggests that utilitarian objects were probably crafted from wood and leather. As Gemma Cruickshanks and Fraser Hunter discuss in Chapter 4, the iron vessel handle may once have been attached to a wooden vessel. The use of wooden bowls and platters instead of pottery vessels was likely common across early medieval western Britain. Lathe-turned bowls of alder

and willow were recovered from Hoddum (Crone 2006, 135–7), while alder and willow bowl fragments and wasters were found in the ditch at Iona (Barber 1981, 335). Lathe turned bowls were recovered from both Loch Glashan and Buiston Crannogs (Crone & Campbell 2005, 33–4; Crone 2000, 112). In fact, the anaerobic conditions of Buiston Crannog yielded a large assemblage of wooden objects, such as bowl roughouts, a barrel lid, a churn lid, a cattle hobble, an ard, a textile comb, weaving implements, mallets, a shoe last and a decorated leather scraper (*ibid.*, 111–29), indicating the range of domestic and craft items of wood that do not survive in dryland archaeological sites such as Trusty's Hill.

A managed woodland near Trusty's Hill was essential to its early medieval household as a source of fuel, food, secure pasturage for animals and for construction and repair of structures. As already noted above, the control and conspicuous consumption of limited timber resources may have had as much to do with the exercise of power over local communities as with the practicalities of constructing large timber structures (Tipping *et al.* 2006, 41). The apparent depletion of available timber resources over the course of the first half of the first millennium AD, following a peak in woodland clearance for agriculture during the latter centuries of the first millennium BC (Tipping 1997, 20–1; Armit & Ralston 1997, 192), may have had the effect of restricting the uses of timber and increasing the control of this resource in the hands of an elite. The contrast between the conspicuous use of mature timber at Rhynie in Aberdeenshire or the high status post-built halls at the Mote of Mark and the pre-Anglian British phase at Lockerbie (Noble *et al.* 2013, 1142; Laing & Longley 2006, 171; Kirby 2011, 47–54) stands in stark contrast to the low status Pitcarmick-type houses in north-east Scotland predominantly built of stone and turf (Carver *et al.* 2012, 184; Strachan & Sneddon 2012, 154) and the modest stake and wattle houses at Whithorn and Dolphinton (Hill 1997, 70; Cook 2002, 77). Exclusive control and conspicuous consumption of mature timber appears to have been a hallmark of elite status in northern Britain during the first centuries of the early medieval period.

Mineral extraction

Exploitation of the local and regional environment was not restricted to organic resources. The single lead bar, recovered from a dark soil deposit on the eastern side of the summit, provides evidence for early medieval lead extraction in Galloway (see Chapter 4). The lead isotope analysis of this ingot demonstrates the likelihood of a Southern Uplands origin. The bar also contained trace amounts of copper and tin as revealed by XRF analysis (see Chapter 4).

This could be taken to suggest that the source metal for the bar was from scrap lead-alloy objects, or that smelting took place in areas where other metals were being worked. However, given the incidence of lead, copper and zinc naturally occurring together in local seams (Wilson 1921, 44), it is more likely that the ingot was directly cast from local galena ore that contained other trace elements.

Numerous mineral veins interspersed in Llandoverly-Tarannon greywackes containing lead, copper and zinc extend in a broadly north-westerly direction around the foot of Cairnsmore of Fleet (Wilson 1921, 44). There are also numerous lead workings in the hills between the Fleet and Cree rivers including those on Ardwall Hill (NX 568 567), Little Brennan (NX 5583 6191), Meikle Brennan (NX 551 614), Pool Ness (NX 5654 6236) and lead mines at Woodhead (NX 531 936). The nearest source of lead to Trusty's Hill is the site of a copper and possibly lead working above Jennoch Wood (NX 5758 5663; Andrew Nicholson *pers. comm.*). Archaeological evidence has been recovered from the Leadhills in Dumfries & Galloway and in western Peebleshire for lead smelting from the tenth century, while there is plentiful historical evidence for lead mining and the smelting of lead in southern Scotland from the twelfth century onwards (Pickin 2010, 81–3). While there is no direct evidence for lead mining in the early medieval period, it is reasonable to surmise that the lead bar from Trusty's Hill originated from the working of a local lead source. Indeed, the close isotope signature of the Trusty's Hill lead bar with the lead beads recovered from the Iron Age promontory fort at Carghidown in the Machars of Galloway (Pashley *et al.* 2007, 283–4; Fig. 4.14) indicates the continuation of local pre-Roman Iron Age exploitation of such lead sources. There is also evidence elsewhere in Scotland for early medieval lead smelting and working, in the form of lead objects, industrial waste and, in the cases of Dunadd and Whithorn, galena ore (Lane & Campbell 2000, 211; Nicholson 1997b, 396). Hoddum also produced some evidence that lead smelting was occurring alongside iron blacksmithing (Lowe 2006, 141–2). Lead objects occur on several other early medieval sites including the Mote of Mark (Laing & Longley 2006, 90), Ardwall Isle (Thomas 1967, 145), Tynron Doon (Williams 1971, 113), Whithorn (Nicholson 1997b, 389–7) and Dunadd (Lane & Campbell 2000, 159–60) though typically as finished utilitarian objects, such as ingots and spindle whorls from Whithorn and Dunadd, or scrap, such as sheet lead from Ardwall Isle.

Thus, lead as a raw source metal for objects in its own right may have been widespread. The primary use for lead at high status early medieval sites, however, was for the production of copper alloys. Tin, copper and lead ingots, as well as rods, were brought to Dunadd as pure sources for on-site bronze smelting

used in fine metalworking (Lane & Campbell 2000, 208–9). The XRF analyses of Trusty's Hill's crucible fragments show that the majority of metals produced were leaded bronzes (see Chapter 4). Several of the crucible fragments show signs of high lead contents indicating leaded alloys from raw source metals with only trace amounts of zinc. This accords well with the evidence from Dunadd where zinc was rare (Lane & Campbell 2000, 209). A higher zinc content would indicate the production of brass rather than bronze. The use of zinc for bronzes was introduced to Britain by the Romans with a gradual decline during the Roman period (Bayley *et al.* 2008, 49–50). By the Anglo-Saxon period zinc appears in metalwork in varying amounts and seemingly without many new bronzes being produced (*ibid.*). The implication of this is that scrapped Roman period brass objects were a primary source material for early Anglo-Saxon metalwork. Despite the proximity of Trusty's Hill to Irish Sea trade networks that could have brought scrap metals to the site, the high lead contents in the crucibles and the ingot suggests that the craftsmen at Trusty's Hill were not routinely or predominantly re-casting either Roman or Anglo-Saxon metal. This may have been a practical response to available metal sources, or a cultural choice.

The lead ingot from Trusty's Hill indicates that organised lead mining somewhere in the Southern Uplands was linked, either by direct control or through trade or patronage, to the household here. The control of a commodity used primarily in high status metalworking was important for sustaining a workshop that was vital to wider economic and social exchanges. While the smelting of the lead may have occurred off-site, the household at Trusty's Hill could clearly acquire lead for use in fine metalworking. The lead, once on site, was alloyed with copper, again perhaps from local sources, to produce leaded bronze. The production of a lead ingot implies either an agreed standard of weight or size, or a 'to order' quantity of lead to form a stock of material. A similar process is likely for other raw metals brought to the site, and it is worth considering the single haematite cube from Trench 5 in light of this.

The workshop

As Gemma Cruickshanks and Fraser Hunter have discussed in Chapter 4, ample evidence for smelting and blacksmithing, the two basic stages of the early ironworking process, was recovered from Trusty's Hill. Smelting slag was recovered from the dark soil deposits on the eastern side of the summit, its amorphous shape suggesting it was raked out of the furnace whilst still hot and soft. A smithing hearth base, formed from accumulations of iron smithing slag, was also recovered from dark soil

deposits within this part of the site. Additionally, small quantities of hammerscale, another diagnostic feature of blacksmithing, were recovered from across the summit with no obvious concentration indicating the focus of activity. Along with the hammerscale, a stone anvil and an iron file were recovered from the rampart collapse on the western side of the summit. As Beverley Ballin Smith noted in chapter 4, the anvil was fractured and may have been discarded and re-used in the fabric of the rampart prior to its collapse. The main concentrations of blacksmithing debris, iron slag and an iron rod with a twisted end, were recovered from the eastern side of the summit indicating that the sixth century smithy was based within this lower-lying shelf of the summit enclosure. The evidence for smelting in particular which is much rarer amongst early medieval settlements than blacksmithing, demonstrates that the workshop at Trusty's Hill was a centre of production rather than simply a workshop that mended items. Furthermore, the distribution of metalworking debris both in dark soil deposits which abutted the timber-laced rampart, and objects such as the anvil contained within the matrix of its collapse, suggests that a workshop existed at Trusty's Hill before and after the timber-laced stone fortification of the summit.

Along with this direct evidence for ironworking, several fire flints recovered from across the summit of likely early medieval date were noted by Torben Ballin in Chapter 4 and are another indication of industrial and domestic fire-making.

Other artefacts found on the summit of Trusty's Hill strongly imply the processes used by the early medieval craftsmen on the site. The samian sherd recovered from the western side of the summit had been rubbed smooth on one side leading to the suggestion that it had been re-used as a source of jeweller's rouge, a fine powder used in polishing away imperfections in finished metal objects (see Campbell in Chapter 4). Fragments of carbonized seaweed, recovered from the primary fill of the rock-cut basin and the backfill on the eastern side of the summit, may also derive from the early medieval occupation of the site. Seaweed was also recovered from Dunadd (Milles 2000, 223). As Susan Ramsay pointed out in Chapter 5, seaweed was traditionally used as a fertilizer, though this is unlikely to be its function in this case given the absence of any other evidence for agricultural activities at Trusty's Hill. Given its presence at two early medieval nucleated forts where industrial craft activities were undertaken, it seems more likely that seaweed was used in metal or glass working. Dried seaweed may, for instance, have been a low-temperature fuel for certain metalworking activities. It is also worth noting that the soda-lime derived from its burning is typically associated with historic glass manufacture, though experiments to

prove its use in early medieval European glass have been fruitless (Salviulo *et al.* 2004, 296–7).

The most important assemblage of materials recovered from Trusty's Hill relates to the production of high quality non-ferrous metal objects and jewellery, as Campbell, Cruickshanks and Hunter have observed in Chapter 4. Despite the small scale of the 2012 excavations, a comprehensive range of evidence for high status metalworking was recovered, including mould and crucible fragments with evidence of leaded bronze, gold and silver working, along with heating trays, a possible 'parting' bowl, a crucible stand, the lead ingot discussed above, a fragment of vitrified material containing copper, a fragment of tuyère, furnace lining, fuel ash slag, and two fragments of possible Bohemian garnet. The XRF analyses of the metalworking ceramics provided evidence that the smiths at Trusty's Hill were smelting their own copper alloys and finely crafting objects in leaded bronze, some with gilding and silvering and perhaps containing garnet or glass insets. It is uncertain whether the Anglian style copper alloy mount was produced at Trusty's Hill, but it illustrates the types and quality of material that the craftsmen at Trusty's Hill were capable of producing. While not a large assemblage in comparison with other contemporary sites, it nevertheless places Trusty's Hill within the highest echelon of fine metalworking in early medieval Scotland.

The metalworking ceramics are the best evidence for the advanced metallurgy employed at Trusty's Hill. In all, 14 crucible fragments from seven vessels, one fragment of a parting bowl, and a fragment of a crucible stand were recovered mainly from dark soil deposits on the eastern side of the summit, but also within the rampart core and foundation deposit on the western side. While the volume of material from Trusty's Hill is dwarfed by the larger contemporary assemblages from comparative sites such as the Mote of Mark, which yielded 132 crucible fragments from at least 14 vessels (Laing & Longley 2006, 26), and Dunadd, which yielded 263 crucible fragments from at least 60 vessels (Lane & Campbell 2000, table 5.3), the quality of the crucible fragments is comparable. The scale of excavation at Trusty's Hill was comparatively smaller and there is undoubtedly a much larger assemblage awaiting discovery. All of Trusty's Hill's crucible fragments were vitrified, typically in a greenish glaze both internally and externally. To achieve this, the vessels were used to melt small amounts of metal within a furnace reaching temperatures about 1000°C. While not in ready evidence on the Trusty's Hill examples, relining the vessel exteriors with thin layers of clay for re-use is a frequent occurrence on crucibles from the period (Lane & Campbell 2000, 205). XRF analyses showed that the majority of the Trusty's Hill vessels were

used to alloy leaded bronzes using combinations of lead, tin and copper (see Chapter 4).

Two important exceptions exist in the assemblage. One thick walled sherd, from the backfill deposit on the east side, contained a deep red enamel internally with little evidence of external vitrification. This vessel may have been employed in either crafting red glass for the enamelling of jewellery or to alloy a bronze where copper was the chief element thereby producing a redder vitrification. The second example, a base of a small triangular crucible again from the eastern side of the summit, shows external vitrification only with black deposits in the interior. The XRF analysis of this sherd showed it to have contained not only copper, lead and zinc, but also silver and it may be that this vessel was latterly employed in melting metals such as silver at a lower temperature. Importantly, the single heating tray fragment, from the same dark soil deposit on the eastern side, also showed signs of both gold and silver working. The tray was vitrified on the outside only, and demonstrated a line of vitrification indicating a lid. The heating tray may have been used to 'part' precious metals, a process that could have led to the creation of objects in their own right, such as the gold wire from the Mote of Mark (Whitfield 2006, 40), or for the gilding and silvering of copper alloy jewellery as evident on the copper alloy mount from Trusty's Hill discussed below.

As Ewan Campbell notes in Chapter 4, the crucibles were all of a medium-sized, thin walled, triangular type (Fig. 4.3). These were common throughout the first millennium AD (Alcock 2003, 330). Only one of the Trusty's Hill metalworking ceramics, the heating tray, showed evidence of having been lidded, and none were apparently handled. In this they are similar to the Mote of Mark assemblage (Laing & Longley 2006, 26–32), but different from Dunadd in Argyll (Lane & Campbell 2000, 204–7) or Brough of Birsay in Orkney (Curle 1982, 40–1) where handled and lidded types predominate. Interestingly, Whithorn also produced a number of near contemporary crucible fragments, including similar examples to both the Mote of Mark and Trusty's Hill, but this assemblage also contained crucible lid fragments with broadly rectangular lugs similar to those from Dunadd and Loch Glashan (Hill & Nicholson 1997, 400, fig. 10.83; Campbell 2005, 63).

Small to medium sized, lidded and unlidded, crucibles are variations on a common theme that spans Western Britain and Ireland from the Iron Age through to the early medieval period. Similar vessels are recorded from Dinas Powys in Wales (Alcock 1987, 122–5), Ronaldsway on the Isle of Man (Laing & Laing 1988, 57), Lagore crannog in Ireland (Hencken 1950, 235) and Garryduff also in Ireland (O'Kelly 1962, 95–6). The examples from

Dinas Powys and Lagore appear with lids bearing rounded lugs, a clear difference in type from the Scottish examples (Campbell 2005, 63). But despite the differences in forms between crucibles and lids, it is clear that craftsmen across Ireland and northern and western Britain were working in a common tradition of fine metalwork. The processes employed in high status metalworking at Trusty's Hill were therefore not uncommon, though in using unlidded crucibles the smiths at both Trusty's Hill and the Mote of Mark were perhaps slightly unorthodox. While furnace temperatures of 1000°C or more are needed for vitrification in the crucible fabrics, Lane and Campbell have suggested that temperatures well in excess of this may have been required to prevent the rapid cooling of the small quantities of metal in the vessels once removed from the furnace (2000, 205). Where lidded crucibles are used, the lids help keep the metals from cooling and also prevent oxidation (Alcock 2003, 330). The use of unlidded crucibles may seem at odds with what, on the face of it, was a more efficient technology. However, in the use of unlidded crucibles a layer of charcoal is added on top of the metals before melting to achieve the same effect as a lid (Lane & Campbell 2000, 205). This often results in charcoal inclusions in the slag at the bottom of these crucibles, and it is worth pointing to the base of the small triangular crucible from the eastern side of Trusty's Hill where there are blackened accretions. Regardless, the melting process would have been relatively rapid once the required furnace temperature had been met through the use of bellows. We can imagine the quick addition of a crucible stand, a fragment of which came from the same dark soil deposit on the eastern side, followed by the crucible itself. After the metals had melted, tongs would have been used to remove the crucibles from the furnace, and it is notable that the impression of serrated tongs were identified on one crucible fragment from the Mote of Mark (Laing & Longley 2006, 32). Once removed, the rapid cooling of metal in such small quantities would have necessitated the immediate and steady pouring into a mould close by. It may be that the craftsmen at Trusty's Hill and the Mote of Mark chose not to use lidded crucibles, where added time was needed to remove the lids, for this very reason. Ultimately, it may have been quicker, and perhaps taken more skill, to use the unlidded crucibles where the metals had less of a chance to cool if poured more rapidly.

While Ewan Campbell suggests that there are no cultural or ethnic divisions represented in the crucibles from the various sites in Scotland (see Chapter 4), the variance in crucible lid types between south-western Britain/Ireland and Scotland suggest regional differences that perhaps point to 'schools' of smithing where master smiths passed their knowledge

on to local apprentices. Indeed, the dominance of the unlidded, triangular, crucible forms at the Mote of Mark (Laing & Longley 2006, 26) and now Trusty's Hill, does suggest regional choices in metalworking or, as an intriguing possibility, the presence of a relatively few master craft workers moving between sites perhaps as part of the household of a peripatetic lord or royal personage as suggested for Argyll (Heald 2011, 229). It is not impossible that the same craftsmen that created the material at Trusty's Hill also worked at the Mote of Mark. Indeed, the near exclusive use of unlidded crucibles at these sites, but not at Whithorn, suggests closer intimate connections between these two secular workshops than with the workshop within the chief religious settlement in Galloway.

Alongside the crucibles, the Trusty's Hill assemblage provided more evidence for non-ferrous smithing, in the form of metalworking debris detected chiefly on the eastern side of the summit. This small assemblage included 16 undiagnostic vitrified ceramics, perhaps crucible fragments or furnace lining, two of which showed evidence of copper (see Chapter 4). The assemblage also included a fragment of tuyère (a protective clay coating on the end of a bellows), several probable fragments of furnace lining and an abundance of fuel ash slag, all from a dark soil deposit. The non-ferrous debris points to an active smith skilled in the technology and processes of the time, based in the same lower shelf area of the summit as the ironworking. As Gemma Cruickshanks notes in Chapter 4, blacksmithing and non-ferrous metalworking are typically concentrated in metalworking zones within early medieval sites, such as at Dunadd (Lane & Campbell 2000, 251), Mote of Mark (Laing & Longley 2006, 174), Dunollie (Alcock & Alcock 1987, 141), Dumbarton Rock (Alcock & Alcock 1990, 108–9), the Brough of Birsay (Curle 1982, 18–19) and beyond Scotland at prominent secular sites such as Dinas Powys in Wales (Alcock 1987, 99). This suggests that these workshops may have employed several smiths, or one versed in a range of skills, producing a wide range of materials and goods from utilitarian tools to the finest brooches. The evidence for both smelting and smithing iron at Trusty's Hill suggests that objects were primarily being fashioned from raw materials rather than being reworked from imported objects.

Although only three mould fragments were discovered at Trusty's Hill, these too point to very highly skilled smiths working within a northern British tradition of high status jewellery production. Two of the moulds relate to the production of pins, while the other was likely used to craft a brooch. Unfortunately, these three fragments do not indicate the types of pins or brooch that were produced. Further excavation of Trusty's Hill will likely yield

a mould assemblage comparable to sites such as Dunadd and the Mote of Mark. There are several inferences to make from the moulds and comparanda, as Ewan Campbell notes in Chapter 4. Two of the fragments indicate moulds with a radiating pattern of thin linear shapes for the casting of multiple objects at a time (Fig. 4.3). This is similar to moulds used to create pins from the Mote of Mark and in the SG17 group from Whithorn (Laing & Longley 2006, 60, fig. 25; Hill & Nicholson 1997, 401, fig. 10.84). The third example from Trusty's Hill may come from a brooch mould. As Campbell states in chapter 4, the cross-shaped key or registration mark on this fragment from Trusty's Hill is not paralleled at the Mote of Mark (Laing & Longley 2006, 35, table 3) or Dunadd, but is on moulds from Rhynie and Clatchard Craig. All three of the Trusty's Hill mould fragments show the common usage of two-sided, bi-valve, moulds created from pure clays. These included the shape of the object being cast, an in-gate channel for pouring the molten metals and perhaps channels between other object shapes if multiple products were being produced in the same moulds. Key, or registration, marks such as the cross-shape on the Trusty's Hill brooch mould were used to exactly match the two sides of a bi-valve mould together. However, as Campbell has discussed, this cannot be taken as an indication of culturally diagnostic similarities in mould form (see Chapter 4). At the Brough of Birsay, it was inferred that the key marks were the choices of individual smiths and this inference was carried forward for the moulds from Dunadd and the Mote of Mark (Curle 1982, 39; Lane & Campbell 2000, 202; Laing & Longley 2006, 32). If this were also the case in south-west Scotland, it is worth noting that the lack of a cross-shaped key pattern in any of the 482 mould fragments from the Mote of Mark perhaps indicates that the sites did not share their individual craftsmen after all. However, it may also be that smiths chose key marks relative to the specific objects being produced rather than based purely on any 'school of thought' or individual 'signature' approach.

We cannot know for certain the types of metal objects that were cast at Trusty's Hill, but we can infer from the varying traces of gold, silver and leaded bronze in the moulds, crucibles and heating tray that the smiths were crafting high status jewellery similar to those from the Mote of Mark and other contemporary sites. The Mote of Mark moulds showed the production of a wide range of penannular brooches, including the widely used insular Type G, pins, buckles, strap fittings, studs and decorative mounts (Laing & Longley 2006, 142–51). The most common mould type at sites with non-ferrous metalworking evidence are pin moulds, along with the actual pins themselves. Judging by the balance of evidence, long pins were by far a

more commonplace, every day, object than the more elaborate brooches (Alcock 2003, 331). Without the impressions of pinheads, the Trusty's Hill pin moulds are undiagnostic, though accepting that the pins were all made of copper alloy we should expect these to have been of a relatively high quality and status. The pin moulds from the Mote of Mark, again, provide us with possible parallels to the pins manufactured at Trusty's Hill. These included a thistle-headed pin, remarkably similar in form if not material to the rare iron thistle-headed pin found at Trusty's Hill, as well as the more typical disc-headed, knob-headed, nail-headed pins and an unusual zoomorphic disc-headed pin with confronted dragonesque creatures, (Laing & Longley 2006, 60–1, 146, fig. 24 & pl. 11). The zoomorphic pin provides a valuable insight into the varied styles and influences shaping metalworking in the region. More pertinently, the confronted dragonesque creatures on this pin mould, and the apparently similar creature on the iron axe-hammer pin from Rhynie (Noble *et al.* 2013, 1148; Fig. 6.7), both dating to the sixth century AD, indicate possible contemporary source material in the form of portable art to the S-dragon carved on to the rock outcrop at the entranceway to the summit of Trusty's Hill (Fig. 6.1).

The fine metalwork

While the bulk of the small assemblage of metalwork related to more prosaic functions such as textile manufacturing, as indicated by the triple-toothed socketed iron tool, or metalworking, as represented by the iron file, iron rod and lead ingot, or domestic occupation embodied by the fragment of an iron vessel handle and the dish-headed iron mount, two of the artefacts stand out as valuable ornaments that reflect the wealth and status of the household of Trusty's Hill.

Alice Blackwell's discussion of the circular copper alloy mount from Trusty's Hill, the only copper alloy artefact found in 2012, adds to the sense of an active and well-connected workshop (see Chapter 4). The chip-carved Germanic Style II birds' head ornament on the object clearly shows it to be of Anglo-Saxon origin, or having been influenced by Anglo-Saxon styles from the late sixth or early seventh centuries. The three lugs on the back have preserved organic material, likely leather, underneath them. Blackwell has drawn attention to the use of similar objects as mounts on horse harnesses such as the example from the Sutton Hoo Mound 17 (Evans 2005, 221–41, fig. 109–12). While there are no exact parallels in the Mote of Mark assemblage, roundel mould fragments from this site nevertheless show that Germanic Style II chip-carved ornamental mounts were being produced in Galloway in contemporary British contexts to the mount from Trusty's Hill (Laing & Longley 2006,

54 & 148–51). The XRF analysis of the Trusty's Hill mount showed that the front had been gilded and silvered giving the impression of a very high status object (see Cruickshanks & Hunter in Chapter 4). Given the evidence for gilding and silvering within the metalworking assemblage, and that local British craftsmen were producing similar ornaments at the Mote of Mark, it is plausible that the smiths at Trusty's Hill could have produced this fine mount. The presence of organic material within the objects lug fittings indicates it had originally been prised from a composite piece, perhaps horse gear, though whether this happened somewhere off-site, in the workshop or during the destruction of the site is open to question. Unfortunately it is not entirely clear from either its context in Thomas's backfill of Trench 4 on the eastern side of the summit, or from its form, by which mechanism the object came to be deposited at Trusty's Hill. The XRF analysis of the mount shows it is composed of a leaded brass, with higher concentrations of zinc than found in either the crucibles or moulds from Trusty's Hill. This suggests it was brought to site as scrap with the intent of it being melted down and worked into another object. That the silvering and gilding of this object had been removed may indicate that this process had already begun. As noted above, leaded brass is more common in Anglo-Saxon England where Roman objects were used as a source material for metalworking. Given its composition it is unlikely that the Trusty's Hill mount was produced at the site. It may have come to the site as part of a complete horse bridle or as an object already removed. There are various explanations for either instance; it may have been gifted to the household, looted from a battlefield or acquired by the workshop's smiths simply as scrap.

The only other finely crafted object found in 2012 is the highly unusual thistle-headed iron pin with copper alloy banding. As discussed by Cruickshanks and Hunter in Chapter 4, the tremendous skill required to hammer the pin into shape, and then finely ornament it with inlaid copper alloy, amply demonstrates the high status of the artefact. But the rarity of similar examples, with just one known parallel from Howe in Orkney (Ballin Smith 1994, 217–8, fig. 130) also suggests it was special at the time of manufacture. The shape of the pin, with a thistle head and banding, would be typically more suited towards casting in bronze as suggested by a strikingly similar shaped mould from the Mote of Mark (Laing & Longley 2006, 61, fig. 24). In the case of the Trusty's Hill pin, it is the quality of skill employed in crafting this object that demonstrates its status, rather than the metals employed.

Unlike the copper alloy mount, the iron pin from Trusty's Hill is more likely to have been a local product, especially given the ample evidence for

blacksmithing at Trusty's Hill. Indeed almost every secular high status settlement so far excavated in south-west Scotland has yielded some form of thistle-headed pin, whether it be a mould for a copper alloy pin at the Mote of Mark (Laing & Longley 2006, 61, fig. 24), or bone pins such as those recovered from Tynron Doon and Buiston Crannog (Williams 1971, 113–14; MacSween 2000, 147). These latter examples may have been employed as patterns for bronze casting to be pressed into a clay mould as proposed for the bone pins from Brough of Birsay in Orkney (Curle 1982, 20). The Trusty's Hill pin, on the other hand, was likely used as a dress fastener itself. Its wide shank suggests that it held together a loosely woven item such as a cloak. The decorative head, and the copper alloy inlay, indicate it was also an object of display and status, and perhaps rank, for the wearer. Such pins ultimately derived from Romano-British traditions (Laing & Longley 2006, 145) and the common manufacture of such items suggests that some late Roman fashions persisted in Northern Britain, perhaps as part of an enduring sense of connection to the Roman world that is evident in the fashions, historical texts and inscriptions of the native Britons of southern Scotland in the post-Roman era (Forsyth 2005, 117; 2009, 33–24; Fraser 2013, 18–23).

The fine metalwork recovered from the 2012 excavations along with the evidence for high status metalworking, and leather and textile manufacture, combine to indicate the wealthy patronage that the household here could employ. As a characteristic of royal sites across Northern Britain and Ireland (Campbell 1996, 84), the use of precious metals in particular points to the household at Trusty's Hill being of the highest echelon of the social hierarchy of early medieval Scotland during the late sixth to early seventh centuries.

The continental imports

Alongside the evidence for high status craft working at Trusty's Hill, the 2012 excavations identified two sherds of imported pottery – both Gaulish – one a sherd of Roman samian ware and the other a later Merovingian sherd of E ware. Each sherd provides an echo of the status, identity and connectedness of the early medieval household at Trusty's Hill.

The Dragendorff 37 samian sherd, recovered from the dark soil deposit on the western side of the summit, dates to the second century AD (see Chapter 4). However, as this dark soil deposit yielded a calibrated radiocarbon date of AD 533–643, remarkably close to the calibrated radiocarbon dates from the rampart core which these deposits abutted and the corresponding dark soil deposit on the eastern side of the summit (see Table 3.2 and Fig 3.5), the deposition of this sherd clearly did not take place until

at least the sixth century AD. As Campbell has noted, its presence at Trusty's Hill in an early medieval context is not uncommon (see Chapter 4). Roman objects have been found at Mote of Mark, Buiston Crannog, Dunadd, Dumbarton Rock, Edinburgh Castle, Dinas Powys, Whithorn, Dundurn, Hoddom and Lockerbie among others.

The single samian sherd from the Mote of Mark is the closest example to Trusty's Hill. It is similarly rubbed down on one side to form a smoothed and rounded convex profile (Laing & Longley 2006, 125). Ewan Campbell described the Trusty's Hill sherd as being used as a source for jeweller's rouge (see Chapter 4) and the same identification likely holds true for the Mote of Mark samian sherd. At Dumbarton Rock, the Roman pottery was considered 'reliquary' within the context of the early medieval assemblage, which included metalworking evidence (Alcock & Alcock 1990, 108). The Romano-British objects found at Dinas Powys were clearly associated with early medieval activity leading to Alcock's conclusion that these were brought to the site as 'curios from deserted Roman sites' (1987, 23). At Dundurn, sandstone slabs and a cut block of tufa that bore evidence of red tile aggregate bound in mortar were thought to derive from a nearby Roman Fort (Alcock *et al.* 1989, 203). Similarly, a number of inscribed stone memorial fragments and building blocks were found incorporated into buildings at the early medieval monastic settlement at Hoddom and are thought to have been brought from the nearby Roman fort of Birrens (Keppie 2006, 123). Many Roman sites in Scotland, from temporary camps to legionary fortresses, undoubtedly remained as constant reminders in the landscape of the Roman past. The same can be said of the Roman road network, which continued as major arterial routes throughout the medieval period. Examples of both exist within easy reach of Trusty's Hill where a Roman fortlet at Barwhill guarded the Glenlochar–Loch Ryan road as it crossed the River Fleet (St Joseph 1983; Carey 2012, 57; Jones 2014). The lack of any other Roman objects in the 2012 assemblage, or indeed Roman Iron Age native objects, might suggest that the samian sherd from Trusty's Hill came from this site just over 1 km to the north.

The analyses of the Roman finds from Whithorn however point to complicated depositional trajectories at play over time. The assemblage of Roman objects at Whithorn includes samian and coarse ware sherds, vessel and window glass fragments, glass bangle fragments, glass tesserae and a coin of Constantius II or Constans (Dickinson *et al.* 1997, 292–7). Among the glass fragments are examples that have been obviously re-used in late sixth–seventh century AD craft working, with one showing evidence as a smoothing tool (Price 1997, 294). The samian from

Whithorn included two sherds recovered from graves, thought to be used as talismans, though it was noted that none of these or the other six sherds showed any undue signs of wear (Dickinson *et al.* 1997, 293). The samian sherds came from seven different vessels, including the same Dragendorff 37 type bowls as the Trusty's Hill sherd, and along with the remainder of the Roman material is considered to most likely derive from a Roman period settlement at the site (*ibid.* 1997, 293 & 296–7). In contrast, at Hoddom, in spite of the evident looting of building material from a nearby Roman fort, no samian pottery sherds were encountered during excavations despite the religious nature of the monastic settlement there where connections to Roman material culture might be given more symbolic weight (Lowe 2006). The fragments of 14 samian ware vessels, again including Dragendorff 37 type bowls, from Edinburgh Castle Rock were recovered from a midden that persisted continuously throughout the Iron Age and into the medieval period (Driscoll & Yeoman 1997, 45). The Roman pottery from this midden included sherds from about 37 coarse ware vessels as well (Dore 1997, 134) and many of the pottery sherds recovered had sharp breaks, in contrast to the sherds from Trusty's Hill and Mote of Mark, which had both been rubbed smooth by re-use. Notwithstanding this, several of the samian sherds came relatively late in the sequence of midden deposits and two of the sherds had been rubbed smooth on one side (Driscoll & Yeoman 1997, 43; Hartley 1997, 133–4). This suggests either that selective vessels had been curated for a significant length of time beyond their initial distribution, or that the middens were actively explored for sherds that could be reused in similar ways to the Trusty's Hill and Mote of Mark examples. At Dunadd, the Roman pottery was discovered alongside a number of other Roman and late Iron Age objects during the early twentieth century excavations (Lane & Campbell 2000, 90). While some of these could relate to the early medieval occupation of the site, the assemblage itself hinted at deposition no later than the second or third centuries AD, a period when Dunadd was certainly occupied (*ibid.*, 88–90). Likewise, while samian sherds were recovered from Buiston Crannog where the floruit of occupation was the late sixth and early seventh centuries, these are more likely to derive from occupation in the first–second centuries AD when the primary mound of the crannog was built (Crone 2000, 64). In fact as Campbell notes in Chapter 4, the form of samian ware recovered from Trusty's Hill, Dragendorff 37, is the most common type of samian found on native Iron Age sites. The occupation of most of the local sites from which this type of samian ware has been recovered, such as Torrs Cave, Castle Loch Island and Dowalton Loch Crannog 3, more plausibly occurred during the first–second

centuries AD than the early medieval period, given the associated finds assemblages (Wilson 2001, 100–2). Other local sites that have yielded samian or coarse Roman pottery include the fortified settlements of McCulloch's Castle and Teroy Broch (Scott-Elliott 1964, 123; Fraser Hunter *pers. comm.*), both of which from their architecture alone more comfortably date again to the first and second centuries AD than later centuries (Toolis 2007, 303; Harding 2004, 187).

The evidence above shows the difficulties in reconciling the presence of Roman material culture, often centuries old by the time of final deposition, in post-Roman contexts. Some sites, such as Whithorn and Edinburgh Castle Rock include material that is residual and perhaps other material that was curated and eventually reused in the early medieval period. Roman material from other sites, such as Dundurn and Hoddom, suggest the exploitation of ruinous Roman sites in the landscape for building stone and useful objects. It would be dangerous to assume that all Roman objects on early medieval sites were only brought there during the post-Roman period from the sites of former Roman military garrisons. Equally, it is difficult to interpret items as being residual or curated without corresponding contextual evidence or indications of reuse or repair. But on the balance of evidence, the Roman material on the hillforts of Trusty's Hill and the Mote of Mark indicates active efforts to import Roman pottery sherds from elsewhere and re-use these in craft working on site.

The pragmatism of reusing Roman pottery is a widely known phenomenon across the former Roman Empire. The occurrence of amphora and fine ware sherds being reused for cutting, grinding or polishing implements is well attested in European contexts (Peña 2007, 152 & 204–5). The processes of discard, reclamation and reuse of these objects often depended on the ready availability of the material and the requirements for utility implements and vessels. Indeed, Ewan Campbell's assertion that the Trusty's Hill samian sherd was reused for jeweller's rouge may reflect a long European tradition of such practices. The Trusty's Hill sherd may have been valued for the intrinsic qualities of the fine fabric and colour (thus its use as a source material for rouge), but also for its hardness perhaps allowing it to be employed in the final polishing of jewellery on site. The same can be said for the Mote of Mark samian sherd. Other examples, such as the Whithorn Roman glass, may similarly have been sought and collected specifically for the value of the material both as a source for cutting and rubbing implements but also as a raw material in craft manufacture. The reuse specifically of samian in northern Britain is considered by some to have been common only from the fourth century AD (Cool 2000, 53), although others have observed that samian motifs inspired native metalworkers in

the centuries prior to this (MacGregor 1976, 186).

While the reuse of Roman objects in early medieval northern Britain can be seen in the wider context of practical processes, it becomes a more interesting proposition in areas where Roman occupation ceased centuries beforehand. To a degree, we should expect later depositions of first–third century AD objects rather than Late Roman material in northern British contexts to reflect the nature and duration of direct Roman occupation. Thus, early Roman materials are largely restricted to building materials residing in ruined fortifications and portable objects inherited from native acquisition during the first–third centuries AD as reflected in the early medieval assemblages discussed above. The preference for samian ware in native Iron Age sites in Scotland, rather than other types of Roman pottery suggests it was an acquisition attractive to native tastes, which is borne out by the penchant for trumpet, headstud and dragonesque styles of Roman brooches amongst native communities too (Harding 2004, 191). The earlier samian ware, particularly Dragendorff 37 type bowls, may have functioned as communal drinking cups during feasting amongst the Iron Age elites of Scotland, Wales and Germany (Ingemark 2014, 223; Arnold & Davies 2000, 112). The selective distribution of fine tableware and other prestigious Roman goods to some pre-eminent native households but not others during the Roman occupation of southern Scotland, may also have owed more to Roman patronage of favoured households amongst the native tribes, than the purely commercial transactions of a free market (Macinnes 1984, 243–4; Dunwell 1999, 352–3; Banks 2000, 277–8; Ingemark 2014, 237). The importation of goods in this period is restricted to exotic and high status objects such as small quantities of fine wares, silverware and coinage, much of which, particularly the Late Roman silverware, was clearly being recycled to produce fine jewellery (Hunter 2010, 96; 2013, 7).

While the sherd was very clearly used in the context of craft working at Trusty's Hill, and within a tradition of using Roman pottery in this way across Britain and Europe, the curation of this sherd begs the question about whether other social processes lay behind its reuse as a source of jeweller's rouge in multiple early medieval workshops. Clearly samian ware had pragmatic uses in the later Iron Age as evident in samian sherd rubbers from Traprain Law (Campbell 2011, 337). However, a review of the evidence for the reuse of Roman pottery at Anglo-Saxon sites in southern Britain, where availability of ancient pottery was less of an issue than in the north, has suggested that the collection of specific types of pottery was not only deliberate, but reflected a societal value for antiquities and the distant past (Eckhardt & Williams 2003, 156–7). Roger White discussed several possibilities for the reuse of Roman

objects in Anglo-Saxon graves including pragmatism and the usefulness of the items, the status display of antiques and heirlooms, the possible cultic qualities the artefacts may have conveyed or indeed that the objects 'imitated' contemporary high status goods (1988, 159–65). However, it is likely that a recycled Roman object conveyed several or all of these messages at once, and following the conversion to Christianity the reuse may have carried with them obliquely Christian overtones equating Roman objects with the Roman religion (Neuman de Vegvar 2001, 123 & 134–5). This value may have translated into people imbuing an object with talismanic properties, as suggested for Roman items from the early medieval cemetery at Whithorn (Dickinson *et al.* 1997, 296). The sense of the past conveyed by the object itself lent a new sense of meaning and value (Eckhardt & Williams 2003, 165). But Roman objects may also have held other, more aesthetic, values in the early medieval period. The choice to reuse Roman samian as spindle whorls from the fourth century AD onwards may have reflected its colour as much as its material qualities (Cool 2000, 54). Indeed, the qualities of red slipware sherds, and their potential to convey complex social messages, may have led to the reuse of three early medieval imported African Red Slipware sherds at Whithorn (Campbell 1997, 316). Carthaginian African Red Slipware is known to date from the fifth or sixth centuries and is found at a number of sites in western Britain typically in association with 'B Ware' amphorae (*ibid.*, 315–9). One of the reused African Red Slipware sherds from Whithorn is an unfinished spindle whorl, though the other two have been rubbed down on one edge similar to the samian sherds from Trusty's Hill and the Mote of Mark (*ibid.*, 316). This may be taken to suggest that it was not the antiquity of a sherd that led to its reuse, but rather its colour, material qualities, and exotic Mediterranean origins in the wider Christian world which may in turn have conveyed status.

The single reused samian sherd from Trusty's Hill, like those from other sites, likely had a range of meanings. As a pragmatic object, the hardness and fine powdery fabric will have made it very useful as a source of jeweller's rouge for polishing metal objects. However, its use in the context of high status metalworking suggests it may have held other meanings to the smiths who used it. The overt representation of the Roman past, meant that the use of the object could have amplified the identity of the smith as a person connected to the wider Roman Christian world. If such an object was also seen as an amulet or somehow magical, then the sherd, and indeed the smith who used it, may have been seen as conduits to the supernatural (Heald 2011, 231). The Trusty's Hill samian sherd is best seen as an object imbedded with multiple messages from the

practical to the otherworldly. Its conspicuous use in fine metalworking perhaps added something to the status of the objects being finished on the site.

The only other pottery sherd from the 2012 excavations, from an imported Gaulish E Ware vessel from the Loire region, is a prime indicator of the status of the early medieval household of Trusty's Hill. Ewan Campbell's discussion of the sherd in Chapter 4, based on his study of early medieval Mediterranean and continental imports to Britain and Ireland (2007), suggests that Trusty's Hill was part of, and possibly central to, an elite redistribution network. Membership of this network allowed for the exchange of locally made goods for exotic Gaulish imports, and the gifting of these through clientage to others. While the evidence as it stands does not directly implicate Trusty's Hill as an importation centre, key characteristics (labour intensive defences, high status metalworking and the economic evidence discussed above) place Trusty's Hill's E Ware in the same context as royal redistribution centres such as Dunadd, Dumbarton Rock and Dinas Powys. The single sherd not only connects the site with a continental trade that seems to have specifically targeted the north Solway Coast, with large assemblages apparent at Whithorn and the Mote of Mark, and now supplemented by Trusty's Hill, but also with a network of exchange stretching from the Scilly Isles in the south to Argyll in the north (Fig. 4.2). Ewan Campbell's observation that the site may have been directly linked to Dunadd and Loch Glashan in Argyll through an extensive exchange network is particularly interesting given the other similarities in the material culture of these sites.

While the exact origin of E Ware is unknown, with Rouen, the lower Loire and the Saintonge in France all being candidates, it is clear that the pottery was imported directly to Britain from Aquitaine by Merovingian Gaulish sailors (Campbell 2007, 48). The trade network was established at some point in the sixth century and extended well into the seventh, though it seems to have been at its height in the early seventh century. E Ware in many forms was transported as a common component in a ship's cargo where they probably held little value in their own right, functioning as storage, partitioning or serving vessels. E1 storage jars, of which the Trusty's Hill sherd is an example, are the most common type of E Ware found at insular sites (*ibid.*, 35–6). Comprising 60% of the total insular assemblage, this suggests that the primary importation of E Ware reflected the demand for Gaulish goods contained within the pots. The contents of some pots certainly included Dyers madder, found as residue on sherds from Dunadd and Buiston, and used in the creation of red dyes for high status clothing (Lane & Campbell 2000, 243; Crone 2000, 158). Traces of dill and coriander have

been found in sixth century contexts in Whithorn and Buiston (Hill 1997 124; Crone 2000, 152–3). These jars may also have contained exotic fruits, nuts, oils, spices or even honey. Along with the jars, other E Ware forms found their way onto insular sites. These include E2 beakers, the second most common form in Britain and Ireland, while E3 bowls and E4 jugs appear to be restricted to primary importation and redistribution centres such as Dunadd, Whithorn and the Mote of Mark (Campbell 2007, 134). The quantity of E Ware in insular contexts is not great suggesting that the vessels and their contents were not the only imports. Weightier items such as wine barrels or blocks of salt may have been the primary cargoes of the Gaulish merchant vessels, though as yet no evidence for such imports has been found owing to the organic natures of such consumables. We might also expect exotic foods that might not need containers, as well as clothing, leather and metal objects and even holy books, though, again, no evidence for any of these has been found. One important class of import that has not yet been detected at Trusty's Hill was a select group of glass wine drinking vessels. Fragments of these have been found on a number of Scottish sites with E ware including the Mote of Mark, Whithorn and Dunadd. Their presence at these sites seems to back the hypothesis that wine was a major commodity in the trade network. Unlike the E ware, these were high status objects in themselves and useful in feasting rituals conferring status through their conspicuous display and use (Ingemark 2014, 237–9). In addition to these physical objects, it is also important to point out that intangible imports undoubtedly came to sites such as Trusty's Hill. Along with the ships' cargoes, the Gaulish merchants transported ideas and news to and from the continent. People, such as diplomats, warriors, monks, priests, and even slaves could have been passengers on the vessels. Seen in this context, the E Ware thus becomes more than a representation of trade but of the mechanisms by which ideas and people were shared from the continent to the lands around the Irish Sea. Apart from Whithorn, where the monastic settlement of Ninian may have been a special target because of its Christian connections, the primary delivery of E Ware and other goods was to high status secular coastal centres possibly by way of local harbours. It is worth considering if the mouth of the Fleet presented a natural anchorage and harbour for Gaulish sailors in a similar fashion to the Isle of Whithorn.

We can only speculate on the goods that flowed from such harbours back to Gaul. The evidence for high status craft industries at the sites where E ware occurs provides one possibility, though no contemporary Insular metalwork or other objects have been found in continental contexts. As the evidence from Trusty's

Hill demonstrates, the household here also controlled significant natural and human resources. Given the evidence for lead extraction in Galloway during this period, for instance, it is possible that metal ores or ingots were a potential export. Another possible export was wool or animal hides. Beyond this, it is difficult to say what could have been exported from the evidence so far recovered. It may be that slaves were exchanged for exotic goods to the Gaulish traders. St Patrick's letter to Coroticus certainly implies that active slaving was occurring between western Britain and Ireland in the fifth century AD (Hood 1978, 41 & 55), though to what extent this was still active in the later sixth century is unknown.

While E Ware primarily represents a trade in exotic materials, probably in exchange for insular goods of value, its use in insular contexts suggests that it did not hold much value in its own right once these transactions were complete. The Trusty's Hill jar appears to have been reused in an altogether different way than the originally intended transportation of exotic goods from the continent. The evidence of animal fats in the organic sooting residue on the inside of the sherd implies that once emptied of whatever imported material was originally in the jar, it became a handy utility vessel. Whether this utility was for cooking or perhaps melting animal fats for some industrial purpose is unknown. However, Campbell has shown that such uses were inconsistent with the E Ware forms and fabrics. Their coarse textures made them prone to breakage when heated, though a number of vessels on various sites seem to have been put to just this use. There is very little evidence for repair or even multiple uses. Some vessels seem to have been redeployed in craft working, while others show no evidence for reuse at all. As at Trusty's Hill many of the vessels are deposited in contexts that must date to soon after their initial importation, though it is impossible to say if this was months, years or decades. However, they did not become heirlooms or were apparently used in high status displays. Nor was there any apparent effort to mimic the pottery forms or create a new pottery industry, despite the fact that the crucibles from high status insular sites show a working knowledge of potting. This all lends credence to Ewan Campbell's suggestion that E ware as pottery was only useful for a short time after importation as utility items, and that it was actually the contents and the goods imported within E Ware vessels that were important (see Chapter 4). It is also apparent from the archaeological record that there seems to have been very little regard for Continental knowledge of pottery manufacture and use. It is this fact more than any other that shows how royal, aristocratic and monastic households of E Ware importation sites were ascribing their own values and cultural meanings to Continental imports. Through

using the items according to their own cultural needs, they were actively and passively negotiating with the knowledge the imports represented. As a result, hybrid uses, ideas and perhaps objects, in other words 'culture', were being created and redistributed through client networks.

Cultural identities and hybridisation

E Ware, like the Roman samian sherd, the thistle-headed pin, the Anglo-Saxon horse mount and the jewellery moulds, suggest the complex processes and trajectories of culture inheritance and creation at Trusty's Hill. Like Dunadd and the Mote of Mark, the centralisation of culture inheritance and creation was crucial to the status and ability to control the intertwined social, political and economic hierarchies that formed the core of power. Without the local control over produce and people, households at sites like Trusty's Hill were not able to access wider trading networks, produce high quality jewellery and other crafts as gifts to bolster their status and that of their clients or indeed engage in long-distance exchanges such as diplomacy and warfare.

In the early medieval period, when identities and allegiances were exceptionally fluid following the collapse of the western Roman Empire, it is generally believed that a tight control of high status goods production, used to legitimise power and cement relations, was a key to power and arbitrating complex social relationships through gift exchange (Campbell 2007, 124). Thus we find evidence for craft-working, employing industrial processes that were unhygienic, loud and producing unpleasant smells, in close proximity to lordly residences at highly visible sites in the landscape across Britain and Ireland. Arguably, this was culture creation as theatre, with the actual act and symbolism of producing hybrid high status objects equally important to the objects themselves (Heald 2011, 234). Indeed, recent efforts to explain metalworking outside hillfort power centres has led to new suggestions that metalworkers were sent to dependent settlements to create objects at these places thereby adding to their status and cementing social bonds (*ibid.*). Regardless of whether this was in every case royal or aristocratic control of craftsmen rather than a broader spectrum of high status craft working on a variety of sites across different regions (Blackwell 2012, 12), it is important to emphasise the close relationships between the craft specialists and their high status patrons, and the choices these two groups made together to create objects that made physical the social bonds of society.

Trusty's Hill may have provided an epicentre by which a complex chain of access, control and patronage could flourish in the late sixth and early seventh centuries. It no doubt created a rich

atmosphere from which local craftsmen could create cultural objects imbued with structured meanings from the mundane to the special. These meanings ultimately stemmed from a wide variety of cultural sources, past and present. The imported pottery at Trusty's Hill reflects in many ways the sense of connection to the Roman past, a *pseudo-Romanitas*, that the local Britons of southern Scotland appear to have adopted during the fifth century AD through their conversion to Christianity and how they sought to distinguish themselves from neighbouring peoples (Forsyth 2005, 119; Fraser 2013, 17–19) and which is particularly evident in Galloway in the use of vernacular Latin around this time (Forsyth 2009, 33). The E Ware pottery demonstrates the participation of the household with a contemporary international exchange network linking the Insular Christian kingdoms with the Continent and the Mediterranean, but perhaps one that relied on a shared sense of a Roman past. This same sense of connectedness with the Roman past may likewise be behind the survival of the samian ware sherd. Given the Romano-British ancestry of dress pins (Laing & Longley 2006, 145–6), the finely made thistle-headed pin from Trusty's Hill, indicates the continued influence of personal dress fashions ultimately with their roots in the Roman period.

At Trusty's Hill, Roman material culture was reused in craft-working, possibly in the theatre of creating new high status items. Likewise, the items that were being created at Trusty's Hill and the Mote of Mark were being done so through the governance of shared Insular traditions. The Roman period brought about fundamental and continual changes to societies across the Empire and its frontiers that did not end or begin arbitrarily in the fourth or fifth centuries AD. Culture, as a continuum of traditions and the acceptance and resistance of new influences and ideas, went on. Material cultural traditions established in the second and third centuries in Roman Britain maintained trajectories into the fifth and sixth (Cool 2000, 54–5). At the same time, older artistic styles, such as Celtic triskele spirals were being revisited suggesting that older objects may have been in active circulation as heirlooms, or as recent discoveries on re-occupied sites, and invoked (or indeed created) collective memories of a distant past (Blackwell 2012, 13). Harnessing past designs and incorporating them with more recent styles, such as interlace, could produce hybrid objects with complex messages for both the creator and eventual wearer (*ibid.*). Thus, even simply stylised items could be highly meaningful.

The new culture and identities also being forged at places like Trusty's Hill, Mote of Mark and Dunadd were also crafted in part due to new knowledge and connections with the former Roman province

of Gaul, ruled in the sixth and seventh centuries by the Merovingian dynasty. These connections brought exotic items, consumables and ideas that could be used in local contexts to bolster and maintain hierarchical relationships. These imports entered into the chain of local hybrid culture creation. The initial meanings and values attached to the items might have been quite different between the Gaulish merchants who brought them and the recipients who may have used them to develop and solidify their own contributions to Insular society (Campbell & Bowles 2009, 312). While the E Ware found at Trusty's Hill, like at Whithorn and the Mote of Mark, appears to have held little inherent value to the site's household, the goods that accompanied it may have been highly valued both in themselves and for their ability to confer prestige and a sense of identifiable connectedness to European affairs.

But it is the presence of seemingly 'Germanic' material culture at these same sites which is the starkest indicator of the complex cultural choices people had in early medieval Galloway. The Anglo-Saxon style gilded horse mount from Trusty's Hill can perhaps be seen in the same light to the moulds for Anglo-Saxon style decorative horse-gear from Mote of Mark and the gold filigree bracteate fragment from Tynron Doon (Laing & Longley 2006, 148–51; Williams 1971, 110–2). The mechanisms by which this material arrived or influenced production at these sites could range anywhere from the incidental encounters of individuals, to indirect trade, to more complex relations through treaty or warfare. But the moulds from the Mote of Mark demonstrate the actual manufacture of Anglo-Saxon inspired objects within a local British context. This is not unique in Northern Britain and does not require direct contact with the Anglo-Saxon world. Campbell and Lane established a convincing case for the smiths at Dunadd being crucial to the combination of Celtic and Germanic art into a hybrid, Hiberno-Saxon, style with the combination of Anglo-Saxon motifs with Irish styles to create unique metalwork (2000, 243–7). They also recognised that similar processes of hybrid culture creation, to that found at Dunadd and the Mote of Mark, were occurring at Dinas Powys in Wales, where native British metalwork occurred alongside evidence for Irish insular styles (*ibid.*, 245–6). The presence of Germanic goods and the manufacture of Insular style objects at a range of sites across Scotland, now including Rhynie in Aberdeenshire (Noble *et al.* 2013, 1142), and the concomitant presence of objects made by British craftsmen in Anglo-Saxon settlements and burials in Northumbria (Cessford 1999, 157), suggests widespread and complex processes of acquisition, localized negotiation with styles and meanings, and the re-deployment of these objects in local contexts. Some Germanic objects may have

been reused, others melted as scrap (though perhaps meaningfully so) while others still may have formed the baseline for mimicry of form and style in processes of material culture hybridisation. That these objects are occurring on high status sites is not insignificant, or in any way a direct indicator of cultural or ethnic affiliation for people residing at the sites. But what seems likely from the evidence of elite metalworking at Trusty's Hill, and crucially the occurrence of Pictish inspired carvings at the site, is that Trusty's Hill was at the heart of this process in south-west Scotland alongside the Mote of Mark and Whithorn. Elite Britons living along the Galloway Coast were drawing from Germanic and a variety of other insular stylistic sources and increasingly moving away from solely Romano-British antecedents over the course of the sixth and seventh centuries. They were actively creating unique culture through objects with shared meanings that could be used to reinforce local relationships, knowledge and practices. This was cultural hybridisation, not assimilation.

The concept of assimilation, the process by which culture is adopted, implies an almost passive regard for ideological or material culture by various participants in a cultural exchange. It also suggests that these concepts and objects have static meanings between groups and over time. The evidence from Trusty's Hill, the Mote of Mark and Dunadd does not accord well with the notion of assimilation. Instead, at these sites we have ample evidence for the households, and the smiths in particular, actively choosing between influences and producing objects with localised meanings. In other words, they were mixing culture to create new ideas and objects that would best fit their local social contexts. But at the heart of this process were conscious and subconscious negotiations between strands of individual, collective and external knowledge systems. It is important here to emphasise that these complex processes of hybridisation were taking place across the former Roman Empire and its frontiers (Bowles 2007, 6–7). Trusty's Hill and other high status sites in early medieval Scotland were thus important places in the northern British trajectories of European hybrid culture creation. This was achieved through a variety of centralised exchanges, including trade and a patronage system based on perpetuating social relationships through gift exchanges and renders (Campbell 2007, 124). In order to maintain the relevance of material culture within this system the master craftsmen and other members of the household of Trusty's Hill undoubtedly possessed intimate knowledge of the cultural, economic, political and social trends of northern Britain and beyond.

Trusty's Hill, the Mote of Mark and Whithorn were far from being isolated assimilators of style and fashion. Rather, they were active participants

in the creation of early medieval Scottish culture and were the epicentres of culture creation and distribution; amalgamating forms, styles and ideas from other groups along with their own unique presentations in order to influence social order. Laing and Longley, in discussing Anglo-Saxon material culture at the Mote of Mark, attempt to reconcile the metalworking evidence from the site in terms of either direct Northumbrian intervention or 'the assimilation of contiguous cultural influences' (2006, 168). Yet the Anglian materials and the evidence for the manufacture of Anglian styled objects must be read alongside the evidence for penannular brooch manufacture from the site and other objects such as pins that are neither Anglian nor frequently paralleled elsewhere in northern Britain. It is clear that the smiths at the Mote of Mark, as was likely at Trusty's Hill, were participating in the creation of objects inspired by a broad swathe of Insular art. That this had a heavy Anglian expression should not be surprising given the increasing influence of Angles in the sixth and seventh centuries. Links between Galloway and Bernicia may have been initially facilitated through the likely British origins of the Northumbrian sub-kingdom of Bernicia (Hope-Taylor 1977, 290–4 & 370; Wood 2011, 35–6) and are perhaps implied by the historical evidence for significant interactions between prominent Britons and this emerging Anglo-Saxon kingdom (Morris 1980, 36–8). Yet, the historical evidence only points to the 'set-piece' interactions of warfare, conversion and marriage alliance, but on an everyday basis the proximity of these two areas must have meant a great deal of cultural and social negotiation. In this context, we should *expect* the material culture of early medieval Galloway, before the Northumbrian hegemony in the later seventh century, to be influenced by Anglian styles. As the carved stone at Trusty's Hill suggests, a range of exchanges with northern British kingdoms, and different culture groups around the Irish Sea and northern Scotland, brought other influences to Trusty's Hill.

The economic and cultural evidence from Trusty's Hill is sufficiently significant in quality if not in quantity to demonstrate that this site was likely the centre of an extensive estate, administered through complex chains of social bonding and clientage, that created culture and controlled a wide variety of resources across the landscape. Agricultural surplus of predominately barley and oats were paid to the household as renders, while crop diversification also brought produce such as flax and seaweed for craft production. Perhaps some of the most valuable resources were oak woodland and metal ores. Control and management of mature woodland and the extraction of mineral sources, and the ability to conspicuously consume these on a large scale if

required, was a mark of the wealth and status of the household of Trusty's Hill. So too was its mastery of animal husbandry, particularly cattle herds, which were visible social currency and a source of prestige across Britain and Ireland. This allowed the household of Trusty's Hill to bind people to them as clients through gifts and feasts. The importance of feasting, where the discerning generosity of a leader in providing drink and food created loyalty by placing someone in social debt, is reflected in the way a cup, or its alcoholic contents – wine, bragget and mead – was often used a metaphor for lordly power and the strong bond between a war-leader and his followers in the early medieval poetry of the Britons of southern Scotland (Ingemark 2014, 237; Clancy 1998, 61–2 & 83). Livestock provided a ready and replete source of raw materials for food and craft and were thus essential to the successful economy of Trusty's Hill. But the control exerted on the local economy could only be achieved through the equally important provision of high quality products from the hillfort that allowed the people who were bonded to its household to maintain their own status in society. The economic, social and cultural prowess of the household at Trusty's Hill allowed it to flourish in the late sixth and early seventh centuries, but ultimately this wealth and power may also have led to the site's demise.

The vitrified rampart: conquest and destruction

The nucleated layout of the hillfort as well as the economic wealth, social status and sophisticated cultural connections of its household, clearly marks Trusty's Hill as a fortified, high status, secular settlement during the late sixth and early seventh centuries. The stature of Trusty's Hill during this period is also exemplified by the spectacular method of its destruction. The vitrified rampart exposed during the excavation demonstrates that Trusty's Hill came to an untimely and violent end that was inextricably related to the nature and status of its household.

Experiments have shown that vitrification – the melting and fusing together – of stone ramparts took substantial man-power, timber resources for added fuel, experience, skill, and a great deal of time to accomplish (Childe & Thorneycroft 1938, 53–5; Ralston 1986, 25–38). The evidence from empirical experiments and from a range of archaeological sites clearly indicates that this was a destructive not a creative process, and deliberate not accidental. Often it was incomplete and coincided with the abandonment of a site, but crucially it always coincides with the burning of a timber-laced rampart

core (Mackie 1976, 208–9; Ralston 1986, 18 & 38). The occurrence of timber beam slots in the vitrified walls at Dun Lagaidh in Wester Ross and at Cullykhan in Aberdeenshire show that timber-laced ramparts were required for vitrification to occur (Mackie 1976, 209; Ralston 2006, 153). However, unburnt timber-laced ramparts, such as Castle Law at Abernethy in Perthshire (Christison & Anderson 1899, pl. 1), illustrate that timber-lacing was not a construction device simply to enable a conflagration. The same patterns of burning and limited vitrification are evident in timber-laced earth and stone ramparts as well, such as at the contemporary sixth–seventh century fort at Clatchard Craig in Fife (Close-Brooks 1986, 132), but it is only in timber-laced drystone ramparts that substantial vitrification, and then only of the rubble core, is evident. Experimentation and archaeological evidence have demonstrated that setting rampart timbers alight was not casually achieved. The act of vitrification depended on pulling down the stone facing of a rampart to expose the core, continually piling a considerable amount of timber and brushwood against individual timbers of the internal framework, and setting fire to these with a favourable wind (Mackie 1976, 210; Ralston 1986, 38; Close-Brooks 1986, 132). It was not something that could be readily achieved in the heat of battle (Ralston 1986, 38) especially as vitrification is often apparent on the interior, not exterior, side of such ramparts. The need to spend sufficient time and energy to destroy a rampart is historically attested by Julius Caesar's observations on the difficulty of setting alight a stone-faced timber-laced rampart (Wiseman & Wiseman 1980, 145). The implication is that a fort had to be overrun by an invading force to allow sufficient access and time to achieve a fully vitrified rampart. Indeed, the high visibility of this act may have been more important than the actual destruction of the ramparts themselves. It has been observed during modern experimentation that the sight of a timber-laced rampart in the process of vitrification 'edged by flames and glowing red in the night' for weeks or even months was a spectacular advertisement of power and the total destruction of the defeated regime (Ralston 1986, 38).

The evidence from Trusty's Hill consistently upholds these previous observations. In corroboration with Charles Thomas' results (1961, 64), the 2012 excavation revealed that the unheated outer and inner stone faces of the summit rampart on the east side of Trusty's Hill were toppled separately prior to the burning of the rubble core. The likeliest explanation is that these were intentionally pulled down in order to expose the rampart core and its timber sub-structure for ease of access and to allow oxygen to fan the flames. This no doubt increased draughts to the flames that came to engulf the rampart. It is likely

that the entire circuit of the summit rampart was vitrified. The rampart core in both the eastern and western trenches on the summit was vitrified. The authors observed vitrified stone on an exposed scarp on the north side of the hill. Likewise, Charles Thomas recorded vitrified fragments in collapsed rampart rubble in the enclosed space immediately west of the carved bedrock and at the foot of the southernmost part of the summit rampart (1961, 65). While it is clear the entire rampart was destroyed by fire, the rampart core was not reduced to a single fused mass but rather discontinuous concentrations of vitrified stone around individual timber uprights. Where the rampart core was exposed and excavated on the east side of the summit, the position of the upright timbers was marked by post-voids ringed by a concentration of vitrified stone, which mirrors the negative timber slots encountered at Dun Lagaidh and Cullykhan, and providing more evidence for *in situ* burning rather than the incorporation of vitrified material from elsewhere. This helps explain another subtle clue to the process of deliberate destruction. It is likely that the evenly spaced hollows recorded during the topographic survey of the site and representing areas of collapse along the north-west portion of the rampart (Fig. 2.1), were in fact the locations where timber uprights were burned *in situ*. The failure to extract archaeomagnetic dates from seemingly secure sections of vitrification (see Chapter 3) thus reflects major slumping of the rampart after its destruction. This was particularly evident on the west side of the summit, where the collapsed outer stone face had long since dropped down the steep slope.

Surprisingly, the micromorphology analysis, of the charcoal rich dark soil deposit abutting the interior of the rampart core on the summit's east side, found no evidence of *in situ* burning (see Chapter 5). This may be because the topmost part of this layer had been removed during Charles Thomas's excavation in 1960 and encountered in 2012 as backfill soil, which was observed to be largely indistinguishable in its composition, artefact assemblage and radiocarbon dating from the *in situ* lower levels of dark soil. Unfortunately, a soil micromorphology sample of the identical dark soil layer abutting the inner side of the rampart core on the west side of the summit was not taken for analysis. Nevertheless, an important observation can be made about the two dark soil deposits on either side of the summit. It is evident that each sealed the collapsed unburnt stone interior face of the rampart and were themselves sealed by the collapsed vitrified rubble core of the rampart. Stratigraphically this must represent the accumulation of occupation detritus *during* the destruction of the summit and its enclosing ramparts. This is borne out by the soil micromorphology analysis that indicated the dark soil on the east side of the summit resulted

from a wet, actively churned, trampled and lightly vegetated occupation deposit (see Chapter 5). That occurrence of similarly composed dark soil deposits on the west side of the summit indicates a prolonged phase of destruction across the entire summit. The remainder of the site's defences and enclosures may have been similarly affected. The minimal accumulation of deposits sealed by the collapse of the lower defences (Fig. 1.10) hardly suggests that these features were upstanding for any significant length of time.

The evidence from Trusty's Hill points to a considerable, deliberate and co-ordinated effort to completely eradicate the fort's defences. While it is beyond reasonable dispute that vitrified ramparts, such as those at Trusty's Hill, are the result of deliberate arson, some contend that this deliberate destruction may mark the self-inflicted ritualised abandonment of a site (Bowden & McOmish 1987, 79). However, this interpretation lacks credibility given the repeated references to the besieging and destruction of forts by fire that begin to be recorded in a variety of annals from the seventh century onwards (Graham 1953, 72; Thomas 1961, 70; Alcock 1988, 31). Instead, there is a consensus that vitrified ramparts are the result of punitive destruction after the capture and pillaging of a hillfort, in order to permanently raze it in a spectacular exhibition of power (Childe & Thorneycroft 1938, 55; Nisbet 1974, 4–5; MacKie 1976, 206–10; Ralston 1986, 38; Close-Brooks 1986, 132; Audouze & Büchsenschütz 1991, 97; Armit 1997, 59; Harding 2004, 87; Ralston 2006, 163; Harding 2012, 189). This process of violent destruction serves to underline the defensive character of the ramparts enclosing Trusty's Hill and which, together with the slingstones recovered from the eastern side of the summit, testifies that there was a tangible threat to defend against.

It is doubtful, however, that the destruction of Trusty's Hill was merely the consequence of a local neighbourly dispute. The magnitude of human resources required to achieve such destruction is likely to have been marshalled only at an interregional level and is one of the most compelling forms of evidence for warfare during the later prehistoric and early historic periods in Scotland (Toolis 2007, 309). While the political and social significance of the control of good quality timber required for the construction of the fort has already been discussed, it is likely that the large amount of fuel required for the combustion of the summit rampart derived from dismantled timbers from the settlement itself and probably also the felling of nearby woodland resources. As discussed above, timber resources were a valuable entitlement and means of exerting social and economic control in their own right. Their purposeful consumption for the destruction

of the area's principle household will have had a profound resonance to the local population. The level of co-ordinated and prolonged destruction to raze Trusty's Hill therefore intrinsically reflects the status that the fort and its household once held. It was clearly important to devote substantial and valuable resources to its destruction in order to present a fiery spectacle that lasted days if not weeks and was visible for miles around. This was not just destruction, not even simply a public expression of destructive power, but a political statement with menace, marking an irreversible defeat and presumably aimed at a wide sphere of influence that centred upon the site.

But it is also possible that the destruction of Trusty's Hill was not an isolated affair. The destruction of the ramparts at Trusty's Hill in the early seventh century is comparatively close chronologically to the likely date, in the mid-to-later seventh century, for the destruction and rampart vitrification at the Mote of Mark further along the Stewartry coast, which was also vitrified in a deliberate act of demolition that abruptly curtailed occupation at this site (Laing & Longley 2006, 10 & 22–4). Given their morphological similarity to Trusty's Hill (Feachem 1977, 129–30), it is entirely plausible that the remaining cluster of vitrified forts in the Stewartry – Edgarton Mote, Castlegower and Mochrum Fell – were also destroyed around this same period in the seventh century. Altogether, the comparatively close dates for the destruction of Trusty's Hill and the Mote of Mark and the cluster of morphologically similar vitrified forts in the surrounding district of Galloway raises the distinct possibility that their destruction resulted from a prolonged campaign or series of campaigns of violent subjugation of the region in the first half of the seventh century, rather than entirely unrelated incidents.

While Pictish raiders have been previously suggested as being responsible for the destruction of Trusty's Hill, as well as for the Pictish symbols at the site (Radford 1953, 237–9; Thomas 1961, 68–9), the identification of local Britons as the principal hand behind the carvings (see Chapter 6) similarly removes any particular focus on the Picts having any compelling relationship to the site's demise. There is plenty of evidence for other likely parties. Irish aggression in northern Britain, and indeed northern British aggression in Ireland, at least during the fifth century AD, is certainly attested by St Patrick (Hood 1978, 41 & 55). Around AD 603, Aedan, the king of Dalriada led an army into southern Scotland where it met disaster at the hands of the Bernicians during the battle of Degsastan, likely located in either Liddesdale or Lauderdale (Anderson 1990, 123; Anderson & Anderson 1991, 11). Inter-British strife

in the late sixth century is attested at the battle of *Arterid* (Anderson 1990, 73–4), identified as Arthuret in northern Cumbria close to the Dumfriesshire border (Skene 1866, 98; Koch 1997, xxxii). However, it was over the course of the seventh century, when first Aethelfrith of Bernicia and Deira, followed by his Anglian successors, particularly Ecgfrith, conquered and made tributary the British kingdoms of the north, including Galloway, to expand the Kingdom of Northumbria (Anderson & Anderson 1991, 11; Smyth 1984, 23–4). It is perhaps most likely given their relatively close scientific dating that the fiery destructions of Trusty's Hill and Mote of Mark and perhaps the other vitrified forts in the Stewartry were the result of successful military campaigns by which the Britons of Galloway fell under the hegemonic control of the northern Anglian kings. Interestingly, all of these vitrified forts in the Stewartry, as well as the comparable fort at Kildoon in Carrick (RCAHMS 1953), lie within or very close to parishes where clusters of early Anglian settlement can be discerned from place-name evidence (Brooke 1991, 297 & 316–18) indicating not only a political, but also an attempted cultural purge by Northumbria in the middle of the seventh century.

The strong Anglian influence in south-west Scotland, at least in Dumfriesshire, was already apparent in the first half of the seventh century at Lockerbie where the construction of an Anglo-Saxon style hall over the site of an earlier, potentially British, hall, has been recognised as a visible display of Northumbrian dominance during a time of conflict (Kirby 2011, 54). The appropriation of existing ecclesiastical settlements at Whithorn, Hoddom and Ardwall Isle may not have occurred until the later seventh century (Hill 1997, 40; Lowe 2006, 172 & 195; Thomas 1967, 177), but by around AD 730 a Northumbrian bishop had certainly been installed at Whithorn. Combined with place-name evidence (Brooke 1991, 313), the excavation results from Whithorn, along with Hoddom and Ardwall Isle, affirm the establishment of flourishing Northumbrian enclaves over the course of the later seventh, eighth and ninth centuries (Hill 1997, 18). While there is some evidence that the Northumbrian possession of Galloway was at least in part a relatively peaceable affair (Brooke 1991, 300; Lowe 2006, 192–4), the vitrified ramparts of Trusty's Hill and the Mote of Mark corroborate the testimonies of the *Historia Ecclesiastica* and the *Life of Wilfrid* in demonstrating that the dominance of Northumbria was also achieved in no small measure through the violent overthrow and subjugation of the native British ruling elite. It is worth noting that one Anglian noble, perhaps King Ida of Bernicia, was known to his British enemies as *Fflamddwyn*, meaning 'the Flame-Bearer' (Koch 1997, xli).

A royal stronghold

The destruction of Trusty's Hill involved more than just the vitrification of its ramparts. The material assemblage from the site demonstrates what was being destroyed in this process of subjugation. This household's control of agricultural, timber and mineral resources, as well as gold, silver, leaded-bronze and iron working, had given its members the power of patronage. Within the system of kinship and clientship that formed the basis of the early medieval social hierarchy in Scotland (Nieke 1988, 11; Karl 2008, 73–4; Blackwell 2012, 19–21), the control of these resources and processes equated to extremely significant power. By instigating craft production and channelling continental trade and exchange, both of which are apparent at Trusty's Hill, power and social position could be maintained by a household (Nieke 1988, 16), but crucially beyond what might be achieved solely from kinship ties. The destruction of Trusty's Hill undoubtedly removed this power and influence from the hands of the local British elite.

It is worth considering the socio-political impact of the site's demise a little further. The nucleated layout of the fort accentuated the hierarchical nature of society. The form and complexity of the ramparts not only offered practical defence but were a conspicuous exhibition of the control over local resources. The successive sequence of outer enclosures, elaborate entranceway and stout timber-laced stone-faced rampart encountered by anyone approaching the summit, was a deliberately ostentatious display of the prestige and status of its household. The likely flaunting of livestock in the outlying enclosures on the southern approach to Trusty's Hill may have been intended as a very public expression, not only of agricultural wealth, but successful leadership and a means of reinforcing legitimacy (Waddell 2014, 142). By the same token, the destruction of these outlying enclosures together with the capture of livestock both from Trusty's Hill and the surrounding area, and the conspicuous felling of managed woodland which no doubt accompanied its assault, sack and burning, may have been another way of demonstrating that the previous regime had failed. We should also not lose sight of the real possibility that the people who lived at Trusty's Hill perished here too. The destruction of this household, which lay at the pinnacle of the local hierarchy, was therefore a clear manifestation of the removal of power from the local elite. The vitrification of the timber-laced rampart around the summit removed the protection, whether implicit or explicit, that the former household could offer its clients, and the control of local resources and redistribution of manufactured and imported goods that it once possessed. More than anything perhaps, the spectacular destruction of the nucleated fort at

Trusty's Hill, conducted in a way that could only have been intended as a very public demonstration of power, brings early medieval politics to the fore of understanding Trusty's Hill.

This was not only the demise of a locally powerful household, but also a way of life. The political destruction of Trusty's Hill likely brought about substantial social change as dependent client relationships were erased along with the site. The rapid exchange of Brittonic and Anglian place-names in Galloway described by Brooke (1991, 313) exemplifies this process as a major cultural shift for the local population. It is likely that this process of subjugation was regional, consuming not only the Fleet valley but much of the north Solway coast. This begs the question of why the need for the dramatic whole scale destruction of Trusty's Hill. Was this hillfort merely the fortified settlement of local nobility or was it the seat of power of a king?

Detailed comparison with other contemporary secular settlements in south-west Scotland is useful in this regard. The Trusty's Hill assemblage might at first glance appear as the poor relation to the abundant quantity of imported goods and metalworking debris recovered from the Mote of Mark further east along the Galloway coast, or the impressive assemblage from Buiston Crannog in Ayrshire. Buiston Crannog, which was interpreted as a wealthy farmer's settlement or even the abode of minor nobility during the sixth and seventh centuries AD (Crone 2000, 64–6 & 165–6), yielded continental imports such as the partial remains of two E-ware vessels, fragments of a glass wine drinking beaker, traces of coriander, dill and black mustard, items of Anglo-Saxon provenance such as a thrymsa coin, copper-alloy cup bindings, an annular brooch, and evidence of metalworking (*ibid.*, 144–58). However, the scale of jewellery production at Buiston, which was extensively excavated, was only at the level of mending or reworking small amounts of copper-alloy for domestic consumption and not the actual manufacturing of fine metalwork (*ibid.*, 165–6). Buiston Crannog was therefore not a source of patronage but rather a recipient, or client, of patronage, likely from a major royal site (*ibid.*, 159). Furthermore, while Buiston Crannog was enclosed by a defensive timber palisade, its excavator observed that the site did not physically dominate its landscape nor did it occupy a large area, its roundhouse being comparable in floor area to that of a wealthy farmer in early medieval Irish society (*ibid.*, 164–5).

Mote of Mark, on the other hand, which has yielded one of the largest assemblages of imported pottery vessels and continental glass vessels in Britain and Ireland, was clearly a place of manufacture of high status items. The workshop produced decorated horse-gear and personal adornments that were undoubtedly used to establish and maintain client

relations (Laing & Longley 2006, 172). Although Mote of Mark was surrounded by a timber-laced rampart that was destroyed in a similar manner to Trusty's Hill, it was not a nucleated fort (*ibid.*, 170). There is no sign of a hierarchical use of space in its layout, and indeed only a very small part of its rocky summit is actually habitable. The 8.5 × 4 m rectangular building that was identified there was certainly substantial but not sufficiently large by itself to indicate an exceptionally high status household (Laing & Longley 2006, 171–2). It was therefore interpreted by its excavators as the fortified workshop of a master craftsman during the sixth and seventh centuries (*ibid.*, 174 & 179). In this scenario, such a person was likely to have been of high status, with an estate to provide the material and labour resources required to house and sustain the site's inhabitants (*ibid.*, 174–9), but was probably dependent on royal patronage for the procurement of local and imported materials required for the manufacturing of items. In return, the workshop at the Mote of Mark undoubtedly served as a key instrument in the maintenance of royal power through the oblique control of high status metalworking which bound individuals into wider socio-political relations (Heald 2011, 230). While the principal inhabitants may have been craftsmen and their families, this does not exclude Mote of Mark as an occasionally royal residence. Indeed, the royalty of south-west Scotland may have been peripatetic and relied on the hospitality of sites like Mote of Mark and Buiston Crannog for cementing social bonds.

While the morphology of Buiston Crannog and Mote of Mark implicate these as middle-tier sites in the perceived social hierarchy of early medieval south-west Scotland, the range of exotica and quantity of artefacts recovered from both these sites is much more extensive than that from the contemporary royal British stronghold at Dumbarton Rock (Alcock & Alcock 1990, 113) or indeed Trusty's Hill. This simply reflects the reality that Buiston Crannog and Mote of Mark have been more comprehensively excavated (Crone 2000, 166; Laing & Longley 2006, 5).

While both Buiston Crannog and Mote of Mark offer similarities, the site that draws the closest comparison with Trusty's Hill is Dunadd in Argyll. Excavations there recovered one of the largest collections of imported continental pottery, brooch moulds and other metalworking debris from an early medieval site in the Celtic west (Lane & Campbell 2000, 98–148). Dunadd was clearly an important centre for the production of fine metalwork during the seventh and eighth centuries (*ibid.*, 204–11). The site yielded a range of metalwork, and evidence of metalworking, from iron weapons and tools to decorated gold, silver and copper-alloy jewellery (*ibid.*, 150–5). The material assemblage from Trusty's Hill, while much smaller, is closely comparable in

quality to the sixth and seventh century assemblage from Dunadd (see Chapter 4; Table 7.1). Furthermore, while Dunadd continued to develop through the eighth and ninth centuries and beyond, the two sites shared a comparable scale of nucleated fort layout, comprising an upper citadel and lower precincts, during the late sixth and seventh centuries (Fig. 7.2).

But what draws the most compelling comparison with Dunadd is the immediate context of the carved stone outcrop at Trusty's Hill. The inscribed rock outcrop at Dunadd also lies within an entranceway zone to the summit enclosure. The Pictish inspired boar and ogham inscriptions on the bedrock at Dunadd are similarly associated with a rock cut bowl or basin (Lane & Campbell 2000, 13; Fig. 7.2). Also, as there is evidence at Trusty's Hill for the deliberate formal demarcation of the approach to the summit, so too at Dunadd was the entranceway space surrounding the carved rock separated from the rest of the fort by a stone bank forming an enclosure in the shelf below the summit – the excavators' Enclosure B (Lane & Campbell 2000, 13 & 250–1). This combination of rock cut features and the effort to separate the entrance space to the summit led the excavators to suggest that this was a ritualised entranceway with, based on analogy from Irish historical evidence, a clear role in the inauguration of kings (*ibid.*, 251). As this widely accepted interpretation applies to Dunadd, so too must it apply to Trusty's Hill.

However, the two areas are not identical. The size of the rock-cut bowl at Dunadd, at 0.25 m in diameter and 0.14 m deep, is much smaller than the rock-cut basin at Trusty's Hill (Lane & Campbell 2000, 19). It has been interpreted as the remnants of a prehistoric cup and ring mark, though its size would be at the extreme end of such features. However, its later reuse in early medieval ceremonies is implied by its proximity to the other ceremonial carvings. It is worth noting in this regard the potential for the Trusty's Hill basin also being earlier than the early medieval phases of activity on the hill, as discussed above. Additionally, the authors observed a section of vertical outcropping that contained a large number of likely natural cup markings immediately to the west of the Pictish carvings at Trusty's Hill and within the largely unexcavated platform to the south of the summit enclosure. While the cup markings are natural, this does not preclude the possibility that they carried some symbolic weight in addition to the basin and Pictish carvings. Regardless of the interpretation of the Dunadd cup mark, this does not alter the essential character of either the Dunadd or Trusty's Hill basins as containers linked in some way with other prominent symbolic carvings. Neither basins are functional wells, and natural springs do not feed either feature. Like the rock-cut basin at Trusty's Hill, the rock-cut bowl at Dunadd merely collects

Table 7.1 Summary of key indicators of status of fifth-seventh century sites in Celtic Britain and Ireland

Site	Imports (pottery/glass)	Defended/ enclosed	Gold/Silver	Fine jewellery production	Weapons	Royal
<i>Dumfries & Galloway</i>						
Trusty's Hill	Cont.	■	■	■	■	■
Mote of Mark	Cont.	■	■	■	■	
Tynron Doon		■	■			
Whithorn	Cont. Med.		■			
<i>Scotland</i>						
Dunadd	Cont.	■	■	■	■	■
Dumbarton Rock	Cont. Med.	■		■	■	■
Edinburgh Castle Rock		■			■	■
Rhynie	Cont. Med.	■		■		■
Clatchard Craig	Cont.	■	■	■		
Buiston Crannog	Cont.	■	■		■	
<i>Ireland</i>						
Clogher	Cont. Med.	■	■	■		■
Lagore	Cont.	■	■	■	■	■
Garranes	Cont. Med.	■		■		■
Garryduff	Cont.	■	■	■	■	
<i>Wales</i>						
Dinas Powys	Cont. Med.	■	■	■	■	■
Longbury	Cont. Med.		■	■		
<i>SW England</i>						
Cadbury Congresbury	Med.	■	■	■		
Cadbury Castle	Med.	■				
Tintagel	Med.	■				

(Adapted from Campbell 1996, 85). Cont.: continental; Med.: Mediterranean

surface water. However, this rather prosaic attribute is unlikely to have been the principal purpose of these features. Given the proximity of the rock-cut bowl at Dunadd to the inauguration stone, identifiable by the carved footprint by which its investiture role has been recognised (Lane & Campbell 2000, 247–9), it seems much more likely that the rock-cut bowl served in anointing rituals during the inauguration of the kings of Dalriada. At Dunadd, this function also carries an implied religious element as represented by the carved Ogham personal name, presumably that of a ceremonial witness or attendant, 'Finn the monk' (Forsyth 2000, 272) being situated adjacent to the Pictish boar carving. An equivalent ritualistic anointing role can be envisaged for the rock-cut basin at Trusty's Hill. Both basins may have also served a religious role as fonts or piscinas whereby the inhabitants of the hillfort and visitors may have sworn oaths. Such religious or ritualistic connotations could have continued at Trusty's Hill until the sixteenth century where, as noted above, coins were deposited into the basin in a possibly votive context. This is reminiscent of the depositions found in the well at Burghead in Moray (Ordnance Survey 1870, 19). Although the inscribed stone outcrop at Trusty's Hill contains no ogham (see Chapter 6) or inauguration footprint, and probably slopes too steeply to have been stood on in any case, the Pictish inscription

and rock-cut basin combination at the summit entranceway nonetheless suggests that these were widely recognised ceremonial regalia used in highly visible political rituals for the inauguration of early medieval kings in Scotland.

Apart from Dunadd and Trusty's Hill, there are few firm comparators for this phenomenon. The only other known Pictish inscribed stone to the south of Pictland was found around 1856 in Princes Street Gardens (formerly the site of the Nor Loch) at the foot of Edinburgh Castle Rock. While obviously not in its original location, it is unlikely to have travelled a considerable distance (Fraser 2008, 64). The likeliest explanation for its presence is that it originated from the hill above in the context of the early medieval, sixth–seventh centuries phase of Edinburgh Castle. Like Dunadd, Edinburgh Castle Rock has been identified as an early medieval royal stronghold (Driscoll & Yeoman 1997, 29, 43, 45 & 227). It is widely accepted as the site of *Din Eidyn*, attested in the poetry of Aneirin as the royal court of the Gododdin of south-east Scotland (Koch 1997, xiii–xiv; Clancy 1998, 46) and also recorded in the Annals of Ulster and Tigernach as being besieged around AD 640 (Anderson 1990, 163–4).

Yet another comparison is offered by the recent archaeological evidence for an early sixth century Pictish royal site at Rhynie in Aberdeenshire. The

site contained late Roman or post-Roman amphorae from the Eastern Mediterranean, the only recorded examples from eastern Scotland, glass Gaulish vessels, bronze toilet implements with Anglo-Saxon parallels and a range of moulds and crucibles for high status metalworking – all of which were unearthed around the Craw Stane (Noble *et al.* 2013, 1142). Significantly, the Craw Stane, which depicts a single pair of fish and Pictish beast incised symbols, stood at one of the entranceways to a large timber enclosure that was burnt to the ground no later than the middle of the sixth century (*ibid.*). The derivation of the name ‘Rhynie’ from ‘Rhyinnoid’ meaning ‘a very royal place’ (Noble *et al.* 2013, 1145), would suggest that social memory preserved something of the status of this site long after it had ceased to meaningfully function as a royal site. This is not entirely dissimilar to how the status of Dunadd was remembered after it had been abandoned (Lane & Campbell 2000, 39–40).

Given the sheer number of Pictish carvings north of the Firth of Forth, it is unlikely that they were all associated with royal sites. It could be that the carved symbols outside Pictland (Fig. 7.3), such as the furthest southerly outlier at Trusty’s Hill, could have served a very different purpose. The contexts of the carvings at Dunadd and Trusty’s Hill, carved into bedrock and thus within their original context, are certainly different to most Pictish carved stones in north-east Scotland which are carved on free-standing stones. However, as the evidence from Rhynie, and perhaps the Burghead Bulls, suggest, the association of Pictish inscribed stones with royal inauguration rites may in fact have been a wider phenomenon that is now largely undetectable among the large number of Pictish inscribed stones that have been removed from their original contexts.

Indeed, both the similarities and dissimilarities between Trusty’s Hill, Dunadd, Edinburgh Castle and Rhynie suggest they are independent responses to analogous political circumstances, but created within local social and political contexts. The key feature at Dunadd that directly relates to inauguration rites is the carved footprint. Without this footprint, and the historical evidence for Dunadd and the role of footprints and shoes in the inauguration of chiefs and kings in Gaelic Ireland and Scotland during the middle ages (Lane & Campbell 2000, 247–9), it is doubtful that the rock-cut bowl and Pictish symbol there would be recognised as related in any way to royal inauguration. The juxtaposition of these features at Dunadd suggest that they functioned as a group and were read together as such (*ibid.*, 249). The precise meaning or function of the Pictish symbols at all four sites is unknown but they perhaps represent the paraphernalia of royal investiture. If the meaning of Pictish symbol pairs is correctly understood as marking individual identity, specifically di-thematic

personal names (Forsyth 1997, 94), then the Trusty’s Hill symbols may have had an added meaning based on a hypothetical marital alliance between local British royalty and Pictish royalty. This has been postulated for the Trusty’s Hill symbols (Cessford 1994, 83; Laing 2000, 11) and such marital alliances are historically attested elsewhere during the seventh century (Clarkson 2010, 147). But while the crescent and v-rod, and double disc and z-rod, symbol pair at Princes Street Gardens might also plausibly represent a di-thematic name, it is more difficult to interpret the single boar representation at Dunadd or indeed the fish/beast symbol at Rhynie. The Dunadd boar is perhaps less a symbol, in that it may not have represented a name or word in the Pictish convention, and more an artistic interpretation of a concept: an event such as a feast (Forsyth 2000, 272), the characteristics of an individual or group, or even a totemic ‘magic art’ that ties the site to the supernatural in some way (Gordon 1966, 222–4). As such it is not a direct parallel to Trusty’s Hill unless we view the right-hand symbols as a similar representation outside the conventions of traditionally paired symbols (see Chapter 6). The Dunadd boar is also closer to the Burghead bulls and other solitary animal figures in Pictland, in style if not in meaning, than it is to the wider corpus of paired Pictish symbols or indeed the Trusty’s Hill symbols. Ultimately the intimate meanings of the carvings and representations found at Trusty’s Hill, Dunadd, Rhynie and Edinburgh are unknowable, but the wider meanings can be adduced from their respective contexts. These are representations of power at regional power centres, two of which are historically attested as royal, and therefore the likelihood is that all sites with this combination are royal.

Notwithstanding the independent expressions behind the carvings at Trusty’s Hill, Dunadd, Edinburgh and Rhynie, the secure dating evidence for high status occupation at all four sites provides some measure of relative chronology for these carvings. The most secure dating is probably that provided at Rhynie, which demonstrates that the enclosures there were built, occupied and burnt down over a short period of time in the late fifth to mid-sixth centuries AD (Noble *et al.* 2013, 1142). It seems unlikely that the Craw Stane was erected at a later date, at an entranceway for which little or no surface trace probably survived. The Pictish carved stone from Princes Street Gardens is out of its original context and cannot be closely dated archaeologically. But if it did originate from the royal stronghold of *Din Eidyn* atop Edinburgh Castle Rock, it too is unlikely to date to a period after the seventh century when the Gododdin of the Lothians were subjugated by Northumbria (Clarkson 2010, 126). The Pictish carving at Dunadd is considered, based

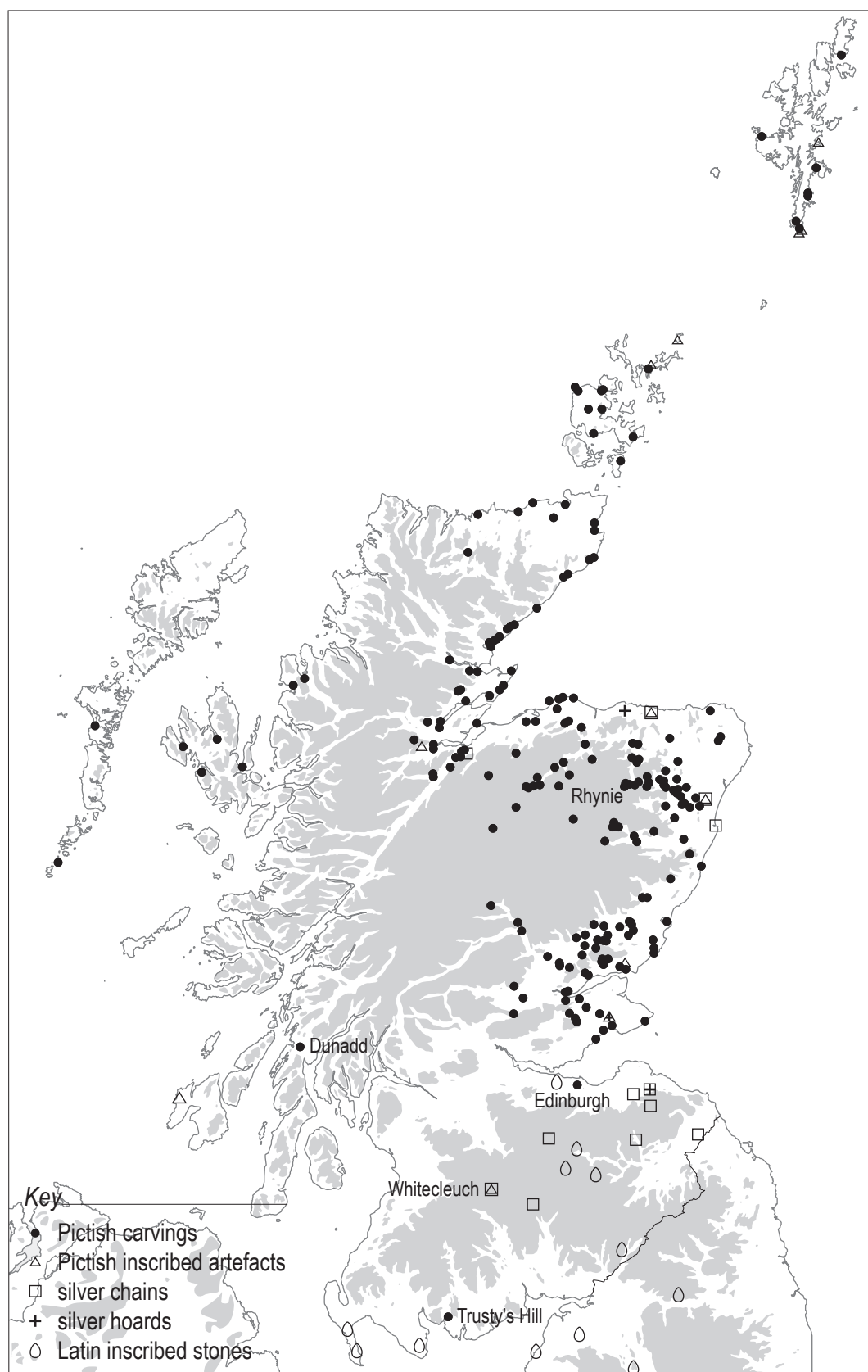


Fig. 7.3. Map of Pictish symbols, British silver chains and Romano-British Latin inscribed stones

on art-historical analysis, to belong to a seventh–eighth century bracket (Lane & Campbell 2000, 22 & 251). This accords well with the dated evidence for the production of high status metalwork and control of long-distance trade from the site (*ibid.*, 262). Given that the rock-cut basin at Trusty’s Hill can be stratigraphically tied into the demarcation of the entranceway to the hilltop citadel, no later than the early seventh century (see above), it is unlikely that the symbols carved opposite this feature were inscribed at a later date especially on the balance of analogy with Dunadd and Rhynie. The entranceway that these features both frame had ceased to actually lead anywhere after this date. It is also difficult to envisage a credible historical and political context, after the establishment of Northumbrian hegemony during the seventh century, for the appropriation of Pictish symbols in a manner that is only apparent at significant royal sites elsewhere in Scotland.

Altogether this contextual evidence indicates that the inscribed symbols at Trusty’s Hill are far earlier than suggested purely from an art-historical perspective (see Chapter 6). While there is no reason to doubt that the Trusty’s Hill symbols exhibit class I and class II traits, the difficulty of dating class I and class II symbols solely from art-historical criteria, or the possibility that class I only preceded class II with a long overlap, should be recognised (Cessford 1994, 82). The rather compressed chronology favoured by art-historical analyses, based on ‘authoritative but unprovable opinion rather than definitive archaeological dating’, is often at odds with the archaeological evidence (Harding 2004, 246). For instance, the sixth century context at Pool on Sanday only provides a *terminus ante quem* for the Class I symbol stone found face down there (Hunter *et al.* 1990, 185), and which could therefore be significantly earlier (Harding 2004, 248). Similarly, the Pictish Bulls associated with the ramparts at Burghead in Moray are normally dated on art-historical grounds to the seventh century (*ibid.*), yet the construction of these ramparts has been radiocarbon dated to between the third and sixth centuries AD (Edwards & Ralston 1980, 208). Indeed many of the Pictish Class I motifs belong to a common sub-stratum of early Celtic art that not only underlines the native Celtic Iron Age ancestry of Pictish symbols but raises further doubts as to the compressed art-historical chronology for Pictish symbol stones (Harding 2004, 244–8). It is of course physically possible that the symbols at Trusty’s Hill, as well as those at Dunadd, Edinburgh and Rhynie, could have been carved much later than the sixth–seventh centuries, and each site’s earlier significance was remembered to a greater or lesser degrees through subsequent centuries. But this requires an unnecessarily complicated explanation, such as linkages with Scandinavian mythology

without locally corroborating evidence (see Chapter 6), that is inconsistent with the archaeological context and raises more questions than it answers. Why would the carvings at Trusty’s Hill date to so many centuries after it ceased to exist as a fortified settlement while sharing so many of the traits of other royal sites in Scotland (Table 7.1)?

A further clue to the earlier date suggested here is the ‘inexact’ carving of the symbols. The intricacies of the symbols at Trusty’s Hill indicate that these were genuine, but not done by a hand entirely familiar with the canonical forms from north-east Scotland (see Chapter 6). In the context of the hybridising processes of culture creation in early medieval northern Britain discussed above, perhaps the most likely explanation for their presence was their creation by an innovative local artist who was reconciling a knowledge of the symbols, but perhaps not their meaning, with local expression at Trusty’s Hill. That an artistic style from Pictland was borrowed or mimicked by local hands should perhaps be less surprising given the evidence for the active reflection of Anglo-Saxon styles and objects witnessed in the material culture of the Mote of Mark. If the local artisans were actively choosing wider insular styles, from groups with strong power bases, in creating their own royal material culture, why would they not also do so with stone carving? The presence of a double disc and Z-rod symbol on the terminal ring of the Whitecleuch silver chain from Lanarkshire, certainly of high status but perhaps even royal regalia (Cessford 1994, 83; Harding 2004, 248; Fig. 7.3) may offer further evidence for the appropriation of Pictish symbols in the elite trappings of Britons in southern Scotland. The use of such symbols on portable material culture, and the movement of such objects to Trusty’s Hill, is one of the likeliest ways the left-hand Pictish symbol pair reached the site. The right-hand representation of the dragon could easily have had more local origins and need not necessarily be ‘Pictish’ at all. Zoomorphic, serpentine representations are common on early medieval European portable objects (Williams 2006, 140–1). The Trusty’s Hill dragon’s form is not only reminiscent of the canonical confronted S-shaped serpents depicted on a number of Pictish Class II slabs north of the Forth and the s-shaped creature on the iron axe-hammer pin from Rhynie (Noble *et al.* 2013, 1148; Fig. 6.7), but is also closely comparable with the zoomorphic forms depicted in the dragon-headed pin mould from the Mote of Mark which offers an important local parallel from around AD 600 for an S-shaped dragon with a curling tail (Laing & Longley 2006, 60–1, 146 & pl. 11). This mould, along with another mould depicting a pair of confronting zoomorphs from the Mote of Mark (*ibid.*, 152), not only suggests a much earlier date for the confronting pairs of dragonesque beasts than is

usually attributed to the Class II Pictish symbols, but offers an alternative source of artistic influences within Galloway. This highlights the possibility of a non-Pictish origin for the dragon and sword and perhaps shares the connotations of martial prowess in the use of dragon epithets for kings and warriors in the Britons' own history and poetry of the sixth century (Clancy 1970, 23–4; Winterbottom 1978, 32; see Chapter 6).

The carvings, along with the basin opposite them at the entrance, are best viewed together as a meaningful pairing, perhaps drawing on the canonical pairing of Pictish symbols as a statement of identity and authority. These two features together are best seen as royal symbols of state perhaps adding a sense of legitimacy to social transactions such as inauguration. Thus, while the carvings inexactly mimicked their northern cousins, they conveyed a shared northern British sense of royal authority and identity. The artist chose to reflect, though not exactly mimic, Pictish symbols because the motivating rationale for the inscription of these symbols stemmed directly from a local British context, not a distant Pictish culture. The symbols should not be seen as ethnically 'Pictish' in either form or meaning but were rather associated with the strength of identity and authority that such symbols conveyed in other parts of Scotland. It is contended here that they are best viewed as a hybrid 'royal stamp' on this site that may have been understood as such by contemporary visitors from across northern Britain. The stone's carver used knowledge of form and broad meanings of Pictish art and was inspired to meld that with their own creative flourish in a locally relevant place and fashion, in an attempt to legitimise royal power in the late sixth and early seventh century.

It is only in the fifth and sixth centuries that the emergence of royal sites is apparent in the archaeological record in Scotland. Indeed it is not possible to identify royal sites within the settlement record of Scotland prior to this. This is unlike Ireland, where a number of sacral royal sites have been identified by a combination of early Irish literature and archaeological evidence (Raftery 1994, 64–81). While there is an apparent trend across Scotland for enclosed single households, whether large timber roundhouses, crannogs or brochs, to achieve some level of pre-eminence during the first two centuries AD (Macinnes 1984, 241–4; Halliday 2002, 104), it is not yet possible to identify complex site hierarchies during the late Iron Age comparable to the early medieval pattern of secular, religious and funerary sites (Halliday 2006, 24). The only possible reference to royalty in Iron Age Galloway is the place-name *Rerigonium*, meaning 'very royal place' (Watson 1926, 34–5), recorded in Ptolemy's geography of the early second century AD and possibly associated with

Loch Ryan which may preserve its name (Ordnance Survey 1978, 15; Rivet & Smith 1981, 447). Though a case has been made for the location of *Rerigonium* at Innermessan, on the south-east shore of Loch Ryan (McCarthy 2004, 125–8), the argument is based on circumstantial environmental factors rather than firm archaeological evidence. The broch at Teroy is the sole contender for a high status settlement nearby during the first or second century AD, though the single sherd of coarse Roman ware recently attributed to this site (Fraser Hunter *pers. comm.*) hardly bestows it with royal status. The development of more complex, nucleated, settlements, in association with an increasingly hierarchical settlement pattern as apparent in Galloway, therefore encapsulates a move away from the tribal structures of Iron Age society in Scotland to the confederated kingdoms of the early medieval period. Significantly this was accompanied by the development of royal rituals and connections to European culture as integral elements of political authority as exemplified at Dunadd and Rhynie (Lane & Campbell 2000, 262; Cook 2013, 345–6; Noble *et al.* 2013, 1047).

The accumulated body of archaeological evidence therefore confers a royal status upon Trusty's Hill prior to its destruction in the early seventh century AD. For if the inauguration stone and its archaeological context are what mark out Dunadd as of royal predominance over other forts in Argyll, the Pictish inscribed stone and its archaeological context may also mark out Trusty's Hill in the same way over other forts in Galloway. Unlike other early medieval northern British kingdoms where the chief settlement is known – Dunadd for Dalriada, Din Eidyn/Edinburgh for Gododdin, Alt Clut/Dumbarton Rock for Clut/Clyde and Din Guaire/Bamburgh for Bernicia (see Fig. 7.6) – there is no historically attested sixth-seventh century 'capital' for the Solway region that can be mapped to a modern location. However, the lack of an historical record does not negate the potential for the archaeological record to illuminate the local and regional context of such a royal centre.

Trusty's Hill lies within a district of Galloway where a cluster of vitrified and nucleated forts is concentrated (Fig. 7.4) and which, as discussed above, may date to around the same period. But while vitrified forts such as Edgerton Mote, Castlegower and Mochrum Fell and nucleated forts including Barn Heugh, Stroanfreggan and Nethertown of Almorness, are morphologically similar to Trusty's Hill (Fig. 7.2), none of these has features such as rock-cut basins and carvings or formally demarcated entranceways. The archaeological evidence recovered from the vitrified and contemporaneous Mote of Mark indicated that this was most likely the fortified workshop of a mastersmith (Laing & Longley 2006, 174 & 179).

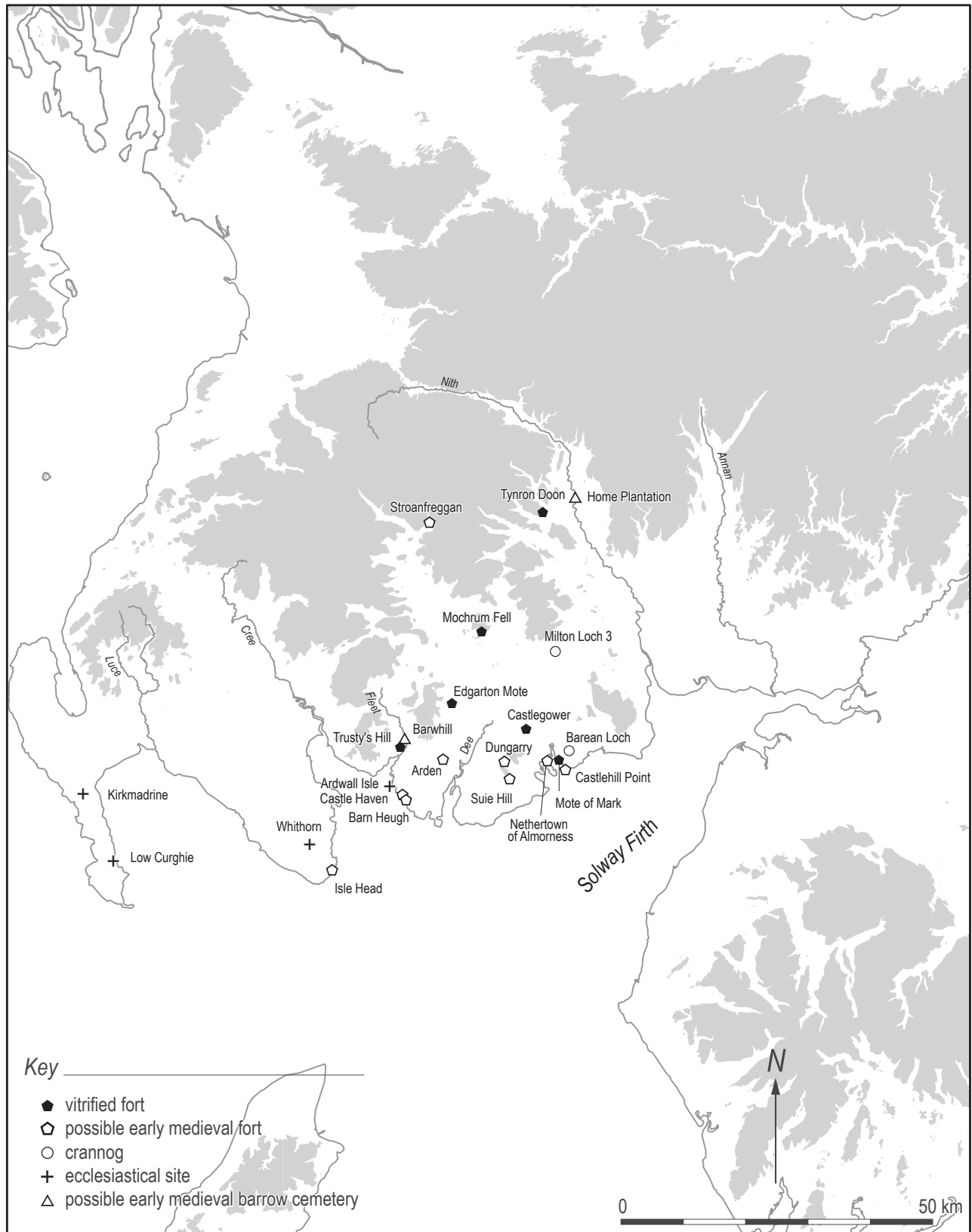


Fig. 7.4. Map of potentially contemporary sixth and early seventh century sites in Galloway

Further to the north, in Nithsdale, the metalworking debris of another early medieval workshop was found below the fortified and prominent peak of Tynron Doon from which a gold filigree decorated panel, dated to the sixth–eighth centuries, was recovered (Truckell 1963, 94; Williams 1971, 112–17; Harding 2004, 209). There is some evidence that Tynron Doon was vitrified (Williams 1971, 117). These other sites in Dumfries and Galloway, along with the contemporary crannogs at Milton and Barean lochs (Henderson 1998, 230) and the galleried dun at Castle Haven (Alcock *et al.* 1989, 209; Cessford 1994a, 73–4; Laing & Longley 2006, 165), may represent the remnants of a well-preserved hierarchy of early medieval high status settlements across the region. These may have served as the residences of related kin, local nobility, wealthy farmers and skilled craftsmen, over which a royal stronghold such as Trusty's Hill was dominant. Each settlement was presumably surrounded by an estate from which agricultural, labour and natural resources could be drawn and which formed the economic basis of their status (Laing & Longley 2006, 173–7), but crucially each was tied to the other through a chain of social and economic exchanges which ultimately ended at the royal household.

Trusty's Hill also stands out from these other sites by its close proximity to two places that may have added to the special, royal, status of the site. A short distance to the north of Trusty's Hill, at Barwhill (Fig. 7.4), is a barrow cemetery identified through aerial photography. This comprises a cluster of five barrows with a sixth outlier. It lies immediately outside a sub-square enclosed settlement of likely later prehistoric date, is near a Roman fortlet west of Gatehouse of Fleet, and lies to either side of a Roman road (Cowley 1996, 108–9). Each barrow is defined by a 1–2 m wide ditch enclosing a square, sub-square or round area measuring 3–10 m across and containing a single, central, burial pit. The Barwhill square barrow cemetery is one of a thin spread of similar sites identified across Dumfries & Galloway, and while some of these barrows might date to the Iron Age (Cowley 1996, 112), their distinctive type would normally be attributed to the early medieval period if found north of the Forth in Pictland (Halliday 2006, 12; Driscoll 2011, 267). The two square barrows at Thornybank in Midlothian, south of the Forth, also likely belong to this same early medieval period suggesting a wider distribution (Rees 2002, 349). The Barwhill barrows certainly conform to the dimensions of barrows identified in Tayside and Fife (Winlow 2011, 341) and the Dumfries & Galloway distribution includes a cemetery of seven ditched barrows at Home Plantation close to the Anglian decorated cross at Nith Bridge. Interestingly, this cemetery is also overlooked by Tynron Doon and may occupy an

analogous situation to Barwhill. Recent geophysical survey of Barwhill has identified another five round barrows within the same cluster and confirms that the barrow cemetery largely respects the course of the Roman road (Jones 2014, 1 & 4). It therefore must post-date the first and second centuries AD. Furthermore, at least two of the barrows truncate the ditch fill of the unexcavated settlement enclosure to the immediate south of the cemetery. By analogy with excavated rectilinear enclosed settlements elsewhere in Dumfries and Galloway, such as Rispain Camp and Carronbridge, the settlement enclosure should be expected to date to between the late first millennium BC and early first millennium AD (Haggarty & Haggarty 1983, 40; Johnston 1994, 272–5). Again, this implies that the Barwhill barrow cemetery post-dates the abandonment of this settlement and belongs to the late Iron Age or early medieval periods. Similar barrow cemeteries, which appear to have flourished north of the Forth during the fifth and sixth centuries AD, tend to be interpreted as having high status burials (Winlow 2011, 349). While typically associated with Pictish culture, given the mixture of cultural symbols and material culture at Trusty's Hill it is not improbable that the members of its household similarly chose to bury their dead in accordance with wider high status burial fashions. It is entirely plausible that Barwhill, located along a major route through the region and highly visible to people travelling along it, was the burial place for the royal elite of Trusty's Hill.

The other site that distinguishes the local context of Trusty's Hill from most other early medieval forts in Galloway is Ardwall Isle. Ardwall Isle is a small island visible from Trusty's Hill, just beyond the mouth of the Fleet and accessible by foot at low tide (Fig. 7.5). Charles Thomas, who excavated on the island after Trusty's Hill, confirmed that this was the site of an early Christian monastic settlement (Thomas 1966, 84). The earliest phase of this settlement, comprising a Christian cemetery focussed around the remains of a slab-shrine, was estimated to date from the late sixth century AD (Thomas 1967, 169) and therefore contemporary with the floruit of Trusty's Hill. Significantly, this slab-shrine was perceived by the excavator to represent a direct cultural connection with Ireland but based on Mediterranean and continental influences (*ibid.*, 168–9). This compliments the evidence from Trusty's Hill and provides further evidence for far-flung contacts and influence in the immediate vicinity of the fort. The early Christian phase on Ardwall Isle was succeeded by the construction of a timber oratory or chapel, with a corner-post shrine, and early grave-markers probably in the seventh century; again related to Irish, continental and Mediterranean influences (*ibid.*, 169–74). The influences that shaped



Fig. 7.5. Ardwall Isle

the chapel and graveyard reflect the development of the site into a centre of religious activity for the district. While the excavator perceived the brethren, as well as the architecture, as deriving from a large monastic centre in Ireland or Dalriada, it seems much more likely that the spread of Christian influence in Galloway, as manifested at Ardwall Isle, derived from much closer to home and that the site was a dependent of Whithorn, only ten miles away by sea.

Whithorn is widely known as the first Christian monastic settlement in Scotland as demonstrated by the fifth century AD Latinus Stone (Forsyth 2009, 30). It is likely that it was founded by the Bishop Ninian in the fifth century, though this has been called into question by recent commentators (Clancy 2001; Fraser 2002). Excavations of part of the large monastic settlement there recovered one of the most significant assemblages of imported pottery and glass vessels in the British Isles, with influences from Gaul particularly apparent during the sixth–seventh centuries (Hill 1997, 12, 28 & 297). The far-flung sources together with the sheer volume, range and quality of materials and sophisticated rural technology recovered from Whithorn (*ibid.*, 28) indicates that the community

here was at the forefront of Christian culture in the Atlantic West, with direct contacts to the continent and Mediterranean, and the pre-eminent monastic settlement in Scotland during the fifth, sixth and early seventh centuries. Tied to Whithorn is the important early Christian centre of Kirkmadrine, in the Rhins of Galloway, the site of three Latin inscribed stones which commemorate priests or bishops who practised in a formal hierarchical ecclesiastical structure in the sixth century (Hill 1997, 6). A further lost inscribed stone once lay at Lower Curchie a short distance south of Kirkmadrine, which commemorated a sub-deacon, while the Petrus Stone originally standing just outside Whithorn (Hill 1997, 6) indicates a continuing ecclesiastical site here in the sixth century. The strength of the archaeological and historical records surrounding Whithorn suggests that it was the centre from which all other early Christian churches and monasteries across south-west Scotland, such as Kirkmadrine, Ardwall Isle and possibly including Hoddum (Lowe 2006, 192) were founded. This was almost certainly associated with, if not actually providing some impetus for, the distribution of fifth and sixth century Latin inscribed stones across

southern Scotland and north-west England (Fig. 7.3). The historically documented establishment of a Northumbrian bishopric at Whithorn by the eighth century marks the cultural appropriation of a strong and unique strand of British Christian traditions in south-west Scotland (Wooding 2009, 13; *contra* Fraser 2002, 57–8). While Ardwall Isle may have been a dependent of Whithorn, its connections with Trusty's Hill may also have been important to its existence. Indeed, it is interesting to note the close connectedness of island Christian communities, physically separate from the secular world, with royal centres. Bamburgh, as capital of Northumbria, was intimately connected with the Holy Isle of Lindisfarne founded in AD 635 on behalf of King Oswald by the Iona trained Irish St Aidan (Rollason 2003, 119). Dunadd was likewise intimately connected to the Columban monastery on Iona (Lane & Campbell 2000, 262). One might also venture that there are potentially similar connections between Edinburgh and the islands of the Forth. A cross slab from Inchcolm indicates an early Christian church or oratory there long before the construction of the medieval abbey (Allen & Anderson 1903, 365–6).

Close connections between kings and monastic bishops is to be expected. As St Patrick's complaint to the soldiers of Coroticus demonstrates (Hood 1978, 55), ecclesiastical communities and leaders in northern Britain and Ireland were influenced by, and sought to influence, secular leaders such as this mid-late fifth century king of the Rock of the Clyde (Fraser 2013, 16). They did not co-exist entirely separate from each other. This is manifested in the archaeological record of Galloway most clearly by the imported pottery and glass from the secular workshop at the Mote of Mark and the monastic settlement at Whithorn. The assemblages are so similar that they are considered to derive either from the same merchant or were part of the same redistributive system along the Solway Coast (Campbell 2006, 113). It is highly improbable that secular and ecclesiastical settlements were importing the same types of goods entirely independently of each other. Whithorn is obviously not coastal and it is commonly assumed that the imported pottery and glass and other perishables came via the traditional portage at the Isle of Whithorn (Alcock & Alcock 1990, 119; Hill 1997, 5–6; Thomas 1997, 98). The entrance to the port is guarded by a large and strongly fortified promontory fort (Toolis 2003, 50–1). An early medieval clay mould recovered from the Isle of Whithorn, and similar to examples from the Mote of Mark, is thought to originate from this fort at Isle Head (Radford 1957, 169; Truckell 1963, 93), which might suggest that this site was a high status secular counterpoint to Whithorn. Certainly, Isle Head fort stands out amongst the many promontory forts of the Galloway Coast in terms of its size and the relative scale and complexity of its ramparts as a place of

strength with ready access to the sea (Toolis 2003, 69; McCarthy *et al.* 2010, 49). It is perhaps significant that the most closely comparable promontory fort on the Solway coast, Castlehill Point, at a headland barely a mile beyond the Mote of Mark, has also yielded possible early medieval finds (Truckell 1955, 18; RCAHMS 1953; Feachem 1977, 129; Toolis 2003, 66).

While Trusty's Hill may be an early medieval royal stronghold, perhaps the place of inauguration, it need not be the sole royal centre in the region. Since a principal function of such major defended sites was to receive the tribute owed to the king by the surrounding population – enabling the royal household to focus on craft production, gift exchange, long distance trade and exchange and warfare – it is inherently plausible that this might have been organised through the establishment of a series of strongholds occupied by clients or stewards and visited periodically by a royal progress. This model is envisaged for the major defended sites of Dunadd, Dunollie and Dunaverty in Argyll between which the kings of Dalriada may have progressed, administered their kingdom, displayed largess, and thus exercised and consolidated power (Nieke 1988, 11–16). Such itineration was an essential element of early medieval kingship in Wales, Ireland and England as well, where 'it made more sense to bring the royal household to the food than the food to the royal household' (Charles-Edwards 1989, 28). A king may have had as many as three royal residences in early medieval Ireland, but only one principal royal 'fort' (Warner 1988, 61). While not unequivocally the case, Lane and Campbell have argued that this model was 'not unreasonable' for Dalriada with Dunadd as its chief seat (2000, 260–1). It is thus possible that the promontory forts on Isle Head and Castlehill Point, or indeed Mote of Mark and the other unexcavated vitrified forts in Galloway, belonged to a similar model of early medieval strongholds tied together by social ties facilitated through royal progress. Unlike other early medieval kingdoms, the coast and a sea based progress may have been integral to this system operating in the Solway. The coastal sites such as Isle Head, and the sites located inland but with views of bays and ports such as Trusty's Hill, the Mote of Mark, and perhaps the nucleated fort at Nethertown of Almorness across the bay from the Mote of Mark, suggest that a maritime redistributive system, based around prominent secular defended centres (Campbell 1996, 84–8), in which high status ecclesiastical sites and many of the other less pre-eminent secular settlements in Galloway also participated, was fundamental to maintaining a unified kingdom in Galloway.

If the cumulative weight of archaeological evidence allows Trusty's Hill to be recognised as a royal stronghold surrounded by a complex hierarchical

settlement pattern, can we equate this putative kingdom with one of the northern British kingdoms of the sixth and early seventh centuries?

It has commonly been considered that Galloway, along with the rest of the Solway region, lay within the elusive kingdom of Rheged (Williams & Williams 1968, xxxviii; Harding 2004, 206). This argument has relied on the absence of firm evidence for Rheged's geographical location in comparison to other kingdoms. Thus, Rheged has traditionally been placed in the historical blank space that south-west Scotland and north-west England occupies on the map of sixth/seventh century northern Britain. Around this blank space were situated an arc of better documented northern kingdoms – Dalriada in Argyll, the Rock of the Clyde in Clydesdale, Gododdin in the Lothians and Bernicia in Northumberland. The historical evidence for the principal power centres of these kingdoms – Dunadd, Dumbarton Rock, Edinburgh Castle Rock and Bamburgh Castle respectively – have all been corroborated by historical and archaeological evidence (Lane & Campbell 2000, 263; Alcock & Alcock 1990, 119; Driscoll & Yeoman 1997, 45; Hope-Taylor 1977, 370). According to this argument, Rheged cannot have been within these regions and therefore it must have occupied another area somewhere in between.

Unfortunately, the historical record for Rheged is extremely meagre, comprising a series of poems praising the martial exploits of Urien of Rheged and his son Owain, attributed to the late sixth century poet Taliesin (Clancy 1998, 79) but contained within a thirteenth century manuscript collection (Laing & Longley 2006, 160). There is also an entry in the early ninth century *Historia Brittonum* recording the late sixth and early seventh century line of early Anglian kings of Bernicia. We are told:

‘...four kings fought against them, Urien, and Rhydderch Hen, and Gwallawg and Morcant. Theodoric fought vigorously against Urien and his sons. During that time, sometimes the enemy, sometimes the Cymry [fellow countrymen *i.e.* the Britons] were victorious, and Urien blockaded them for three days and three nights in the island of Metcaud [Lindisfarne]. But during this campaign, Urien was assassinated on the instigation of Morcant, from jealousy because his military skill and generalship surpassed that of all the other kings’. (Morris 1980, 38)

In addition to recounting Urien's fate, the *Historia Brittonum* also perhaps provides a clue to that of Rheged as well. It states that King Oswiu (642–670) was wed to ‘Rienmellt, daughter of Royth, son of Rhun’ who was himself a ‘son of Urien’ (Rollason 2003, 88). This marriage of the Northumbrian and Rheged royal lines in the 640s, coupled with the archaeological and historical evidence for the Northumbrian domination of Galloway in the seventh century, suggests that this

political act fused the two kingdoms together (Smyth 1984, 22–4). Later in ninth and tenth century Welsh poetry, Rheged became a metaphor for a vanished heroic Brittonic past (Clancy 1998, 152).

Urien is most commonly associated with Rheged in Taliesin's poetry, though he also appears as lord over other regions and places, such as *Idon*, *Llwyfenydd*, *Yrechwydd*, *Aeron* and *Catraeth* suggesting his power extended to a larger hegemony. However, neither Rheged nor these other regions can be confidently identified on the map. This has led researchers to suggest widely divergent locations for Urien's Rheged, in Wales, Lancashire, Cumbria, Dumfries and Galloway, Redesdale and Loch Lomond (Williams & Williams 1968, xxxviii–xxxix). So while Taliesin's *Idon* (modern Eden) and *Llwyfenydd* are commonly equated with the valleys of the Eden and Lyvennet rivers in Cumbria (Williams & Williams 1968, xlv; Laing & Longley 2006, 162–3) this has been dismissed by others as based on either mistranslation, a ‘sounds like’ etymology, or attributing these non-specific topographic words that could be applied to many places with modern place-names that seem to preserve them (McCarthy 2002, 372; Clarkson 2010, 70–3). When Urien is described as lord of *Yrechwydd*, this may be ‘a flow of water, a tidal current’ and therefore readily recognisable as the Solway (Watson 1926, 156) or it may mean ‘fresh water’ or ‘land of fresh waters’ and identifiable as the Lake District or the cataracts on the Swale (Williams & Williams 1968, xli; Laing & Longley 2006, 162). When Urien is praised as the defender of *Aeron*, Taliesin could have meant Ayrshire in south-west Scotland or Airedale in Yorkshire (Williams & Williams 1968, xlvii). Even one of the most apparently certain locations Urien ruled such as *Catraeth* commonly identified as Catterick (Laing & Longley 2006, 163), is not beyond doubt. It has been argued that though philologically their names might have the same origin, there is no actual record of Catterick ever being called Catraeth and that its potential meaning of ‘battle shore’ may not have meant Catterick at all (Dunshea 2013, 84–101). The problem is that the identification of the place-names in the poetry of Taliesin, or his contemporary Aneirin, will never be secure (Clancy 2013, 156).

The same lack of consensus applies to the few place-names that survive on the modern map which may relate directly to Rheged. Place-names such as Rochdale in Lancashire, recorded in the eleventh century as Recedham and thought to retain in the first element of its name a word similar to Rheged, could also derive from Old English *reced* meaning ‘hall’ or ‘house’ (Clarkson 2010, 72). Similarly, Dunragit in the East Rhins of Galloway has long been thought to mean ‘the fort of Rheged’ (Watson 1926, 156; McCarthy 2002, 359), but could alternatively mean the ‘fort of the women’ or ‘fort of the hags’ (Laing

& Longley 2006, 164). Likewise the phrase *tra merin Reget* from the Book of Taliesin has been translated as 'beyond the sea of Rheged'. Yet this vague reference, which certainly suggests Rheged had a coastline (McCarthy 2002, 372) can be taken to imply the Solway Firth (Williams & Williams 1968, xli), Luce Bay (McCarthy 2002, 372–3) or is simply a 'vague signpost pointing north from Wales' (Clarkson 2010, 72). Reconciling the meagre historical record with place-names is hampered by the insurmountable difficulty in identifying what places, such as the Fleet valley, the Solway Firth and Galloway, let alone the many individual settlements, were actually called by the local Britons before Anglian and Norse-Gaelic derived names replaced them during later centuries.

Indeed the historical credibility of Taliesin's poems and the *Historia Brittonum* is keenly disputed with arguments that these are later medieval Welsh constructs (e.g. Dumville 1977; Padel 2013). Yet, these arguments lack historical coherence and contradict the testimony of late fifth and sixth century writers such as St Patrick and Gildas (Hood 1978, 55; Fraser 2013, 15–16; Winterbottom 1978, 29 & 34; Williams & Williams 1968, xxxv). They are in large part a rather nihilistic response to often naïve uses of these sources as offering historical facts (Dunshea 2013, 92 & 104–7; Clancy 2013, 165; Koch 2013, 197). Instead an alternative approach to the poetry of Taliesin and Aneirin avoids treating them as 'history', but instead as literature set within a historical landscape and context (Dunshea 2013, 105). While techniques of literary analysis can be useful when examining individual sources, it must be remembered that such historical sources are 'witnesses', to greater or lesser degree, advocating a particular view of reality (Heather 2006, xiv). Corroboration is the most appropriate tool when testing the credibility of these 'witnesses' and should not be so conveniently sidestepped (*contra* Dumville 1977, 182). Nor should the archaeological record be studied in isolation to the historical record of the same region over the same period (Alcock 1988, 22; *contra* Dumville 1989, 213).

With this disclaimer in mind, it is worth briefly discussing the landscapes that Taliesin claims formed the background to Urien's exploits. There are several places and regions associated with Urien that can be perhaps more confidently identified. These are located across central Scotland and north-east England, forming an arc around south-west Scotland & north-west England (Fig. 7.6). The battle at *Rhyd Alclud*, 'the ford of the Clyde' is accepted by most as upriver from Dumbarton Rock (Clancy 2013, 155), which perhaps makes Urien's reputed defence of *Aeron* more tenable as Ayrshire than Airedale. The raid into *Manaw* is probably *Manaw Gododdin*, the plain of the Forth where Slamannan and Clackmannan preserve its former name (Clancy 2013, 156 & 160). However,

the possibility that *Manaw* referred to the Isle of Man cannot be entirely discounted. The battle at *Brewyn's* cells may have been the derelict Roman fort of Bremenium in Redesdale (Laing & Longley 2006, 163; Clarkson 2010, 77), while the *Historia Brittonum* records Urien leading a campaign of four regional powers against the Angles of Bernicia at Lindisfarne, identified by its Brittonic name of *Medcaut* (Morris 1980, 38). One of the other British kings in this alliance led by Urien, Rhydderch Hen, can be confidently identified as the king of the Rock of the Clyde and a contemporary of St Kentigern and St Columba around the end of the sixth century AD (Clancy 2013, 160). The relationship of Urien with the better documented Rhydderch Hen and the line of Anglian kings indicates he flourished sometime between the 570s and the 590s (Laing & Longley 2006, 161; Fraser 2009, 127). Another king, Gwallawg, is usually identified as the ruler of Elmet in West Yorkshire, but who is attributed to several battles in southern Scotland by Taliesin (Clancy 1998, 91). A shaky alliance forged to destroy a common enemy on the ascendant, namely Bernicia, perhaps explains how four kingdoms came together, but does little to solve Urien's demise at the hand of the last of the four kings, Morcant, whose kingdom is even more elusive than Urien's. It may be that Morcant was a rival of Urien's and perhaps held territory that was often in conflict with Rheged. Taliesin's oft repeated exaltation of Urien as a cattle raider suggests that his campaigns were motivated by the desire to exact cattle tribute from neighbouring kings and so gain wealth and supremacy over them, a common political manoeuvre amongst early medieval Celtic kingdoms (Charles-Edwards 1989, 30). This would seem to limit the range of much of Urien's campaigning to areas bordering Rheged. The *Historia Brittonum* and the poetry of Taliesin appear to paint Urien of Rheged as the king of the pre-eminent kingdom of northern Britain during the later sixth century, a kingdom that was rapidly expanding out from a core area somewhere in south-west Scotland or north-west England during his lifetime. But is there any archaeological evidence to corroborate this?

Carlisle, long attributed as the 'capital' of Rheged (e.g. Dillon & Chadwick 1973, 108; Smyth 1984, 21; Cessford 1999, 150), has failed to produce any of the archaeological evidence, found at other elite secular settlements, to support such a claim (McCarthy 2002a, 147; 2014, 241). Carlisle has been thoroughly investigated over many years and though post-Roman occupation is undoubtedly apparent, it is clear that its size and status had greatly diminished from a Roman town to something more akin to a minor estate centre (McCarthy 2002a, 137–9; 2014, 241–2). There is also evidence for continued occupation at some of the Roman forts along Hadrian's Wall, notably Birdoswald and Vindolanda. A series of fifth and

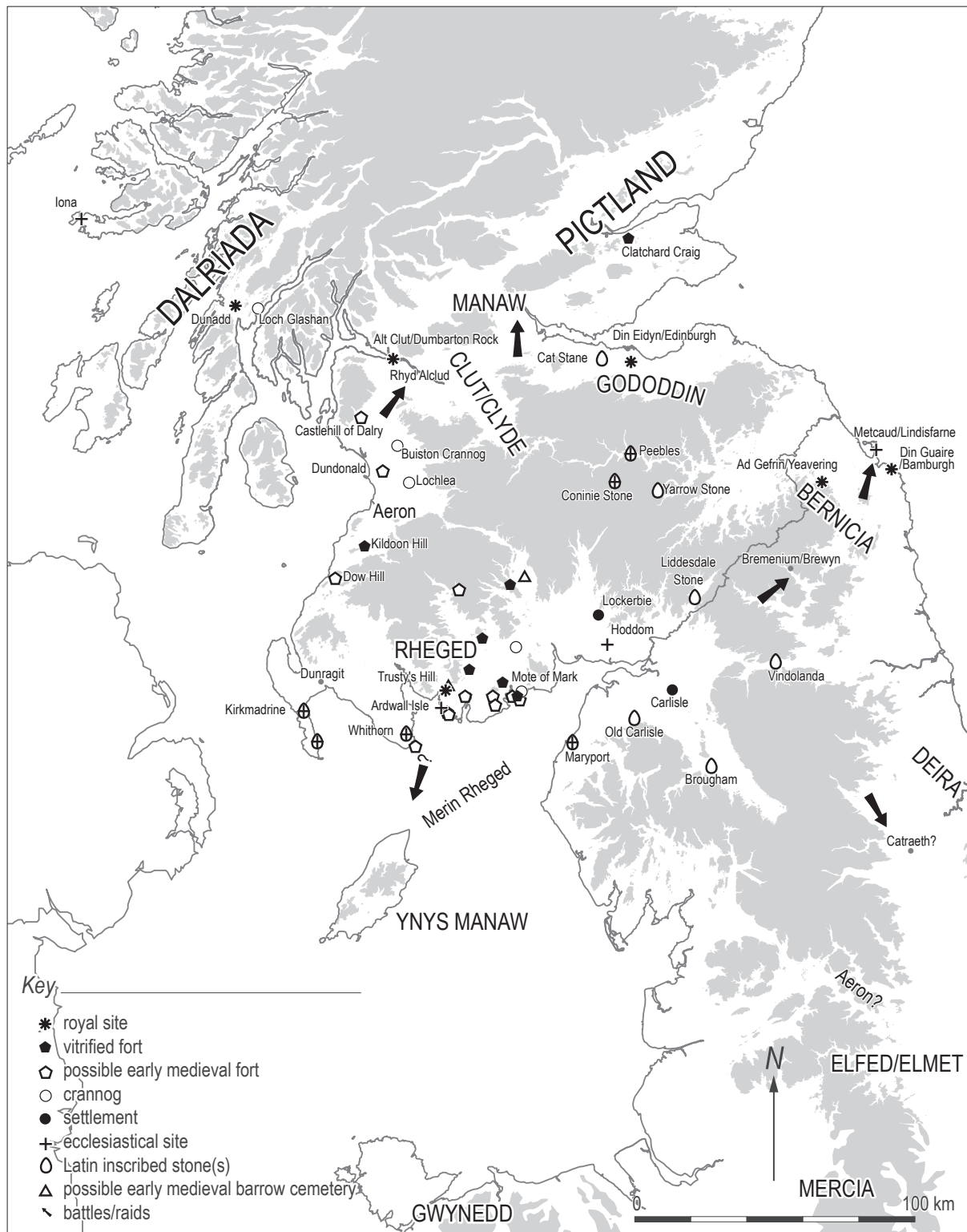


Fig. 7.6. Map of Rheged and neighbouring kingdoms of northern Britain during the sixth and early seventh centuries

sixth century Latin inscribed stones from Vindolanda, Maryport, Brougham and Old Carlisle appear to be part of the same distribution of such inscribed stones across southern Scotland (Dark & Dark 1996, 60–2; McCarthy 2002a, 134–7; Fig. 7.6). However,

it is unclear if these former Roman military sites continued to be occupied into the late sixth century. Likewise, the enclosed settlement at Ewe Close near Crosby Ravensworth is often equated with Taliesin's *Llwyfenydd* and although part of the site overlies, and

therefore post-dates, a Roman road, excavations there only yielded Roman material with no evidence to suggest occupation in the sixth century (McCarthy 2002a, 147). There is a perceptible dearth of known post-Roman settlements in Cumbria (Harding 2004, 205) with no archaeological evidence to support the traditionally assumed expanse of Rheged, centred upon Carlisle and focussed on a massive area from Lancashire to Ayrshire.

An alternative scenario has been suggested where the core of Rheged lay instead in the Rhins of Galloway (McCarthy 2002, 377). However, the case for this is based not on any compelling archaeological evidence but rather the agricultural quality of its soils and frequency of sunshine relative to other parts of south-west Scotland (*ibid.*). The argument also seeks to link the place-name *Rerigonium*, 'most royal place' seen as being located somewhere near Loch Ryan during the first and second centuries AD, with *Penrhyn Rhionydd*, one of the three national thrones of Britain according to the later medieval Welsh Triads (McCarthy 2002, 377). While this link might be philologically plausible (Watson 1926, 34) there is no corresponding historical or archaeological support. As noted above, the interpretation of the place-name Dunragit as the 'fort of Rheged' (*ibid.*, 156) is not conclusive. More importantly, the morphology of the unexcavated Round Dounan fort at Dunragit is not convincing as an early medieval site (*contra* Reid 1952, 155–7; McCarthy 2004, 127). It is also worth noting that recent excavations over a 7.4 km long strip at Dunragit recovered significant prehistoric remains, but nothing dating from the early medieval period (Arabaolaza *et al.* 2015).

Yet, as the distribution of E Ware illustrates (Fig. 4.2), merchants from western Gaul were certainly attracted to south-west Scotland during the sixth and seventh centuries, bypassing regions such as northern Wales and Cumbria entirely (Campbell 1996, 87–8). The assemblages of imported pottery and glass recovered from Whithorn and the Mote of Mark are amongst the largest in Britain and Ireland and indicate that a wealth of goods was imported into Galloway directly, and presumably exchanged for valuable exports in return, over the sixth and seventh centuries. The Trusty's Hill E Ware sherd from the 2012 excavations may be just the earliest indicator of a comparable assemblage at this site. It is doubtful that the exchanges that brought this material could take place across the Galloway coast without the presence of a strong, stable, kingdom. Indeed, the overall artefact corpus from Trusty's Hill, inextricably links this centre of production with an apparent and widespread redistributive system

in south-west Scotland that was used to consolidate socio-political relations and maintain regional power. There are no other comparable areas in the Solway region that can rival this archaeological evidence suggestive of a powerful early medieval kingdom. And within south-west Scotland, only at Trusty's Hill is there evidence of royal inauguration rites comparable with other contemporary royal sites elsewhere in Scotland. It is therefore probable that Trusty's Hill was the chief seat of this kingdom, lying at the apex of a distribution pattern of fortified secular settlements and ecclesiastical sites across central Galloway. This may well have extended north into Ayrshire given the comparable assemblages recovered from sites like Buiston Crannog and Castlehill Dalry (Crone 2000, 158–9; Smith 1919, 126–9) and the analogous morphology in fortified sites like Kildoon (RCAHMS 1953). The influence of the royal household at Trusty's Hill might also have extended east into Dumfriesshire, and even beyond into Cumbria and upper Tweeddale, but its *core* appears to be Galloway. The complex hierarchical settlement pattern and abundance of material wealth from the sixth to the seventh centuries in central Galloway is not only unmatched anywhere else in the archaeological record of south-west Scotland and north-west England, where Rheged is thought to lie, but is unmatched in the archaeological record from this specific period in the rest of Scotland and northern England (Fig. 7.6).

The sudden demise of Trusty's Hill and the Mote of Mark also demonstrate that there was a violent and protracted effort to arrest the secular power of the region in the first half of the seventh century, precisely when historical sources show Northumbria in the ascendant, the unification of the Northumbrian and Rheged royal houses, and the beginning of Anglian hegemony in south-west Scotland. Indeed, the rapid spread of later seventh and early eighth century Anglian place-names, and the expansion of Northumbrian religious establishments and sculpture through the region over this period, suggests that the destruction of Rheged required a whole scale cultural transformation. The archaeological evidence from Galloway thus corroborates the historical evidence for a kingdom that was pre-eminent in northern Britain in the decades around AD 600 but which faded into obscurity through the course of the seventh century. It seems not unreasonable to conclude that this archaeological kingdom without an historical record, and the elusive kingdom of Rheged, a historical kingdom without an archaeological record, were in fact one and the same.

Conclusions

At some point in the sixth century AD, a household laid claim to Trusty's Hill; the site of an earlier Iron Age settlement. In the decades around AD 600, the summit of the hill was fortified with a timber-laced, stone-faced, rampart possibly topped with a timber parapet. Around the same time supplementary defences and enclosures were added to its lower-lying slopes transforming Trusty's Hill into a nucleated fort (Fig. 8.1). Anyone approaching the site from along the southern flank of the hill will have passed the lower enclosures, where some of the household's cattle wealth was perhaps displayed, before reaching the summit's entranceway flanked on its two sides by a rock-cut basin and an outcrop on which two powerful symbols, resembling those from Pictland, were carved. One's eyes and feet were drawn through this symbolic entranceway where, perhaps, rituals of state were occasionally conducted, by horn-works to either side. On entering the summit citadel one may have been greeted with the sight of the king's hall at the highest part of the hill on the west side, and the workshop of his master smith occupying a slightly lower area on the eastern side. The layout of this fort was complex, each element deliberately formed to exhibit the power and status of its household in the same way as other royal forts in Northern Britain.

Yet, the settlement at Trusty Hill nevertheless comprised essentially a single household, where domestic activities were conducted alongside industrial, symbolic and state pursuits. The diet of this early medieval household, with the predominant consumption of cattle over sheep and pigs, and oats and barley rather than wheat, was largely indistinguishable from their Iron Age ancestors. But they were not engaged in agriculture themselves. Instead, this household's wealth relied on the indirect control of farming, animal husbandry and the management of local natural resources – minerals and timber – from an estate probably spanning the

wider landscape of the Fleet valley and estuary. Control was maintained by bonding the people of this land and the districts beyond to the royal household, by gifts, promises of protection and the bounties of raiding and warfare. Integral to the politics and economy that governed this fragile system of loyalty was the most important source of Trusty's Hill's wealth – the direct production and gifting of fine, high status metalwork of iron, leaded bronze, silver and gold. This royal household was also a participant, if not a controlling factor, in a redistributive system of high status imported goods from elsewhere in Britain and as far away as Continental Europe. By restricting access to these imports along with their own products, the royal household at Trusty's Hill may have influenced and consolidated socio-political relations in the wider region over the late sixth and early seventh centuries AD.

It is in this context that the Pictish style symbols at Trusty's Hill should be viewed. There is now no doubt that they are genuine early medieval carvings, likely created by a local Briton, melding innovation with deep seated traditions. They provide significant evidence for the initial cross cultural exchanges that forged the notion of kingship in early medieval Scotland. The location of the symbols at the entranceway to the summit of Trusty's Hill and opposite a rock-cut basin, mirrors the context of the inauguration stone at Dunadd and is therefore integral to understanding these symbols. The nuclear fort of Dunadd was a royal centre for the kings of Dalriada from the sixth or seventh centuries AD, and it contained a material assemblage of high status imported goods and fine metalwork production comparable in quality to Trusty's Hill. Dunadd's Pictish boar, footprint, ogham and rock-cut basin at the entrance to the summit enclosure are best viewed as a set of royal regalia where the rituals of inauguration took place. The only other Pictish



Fig. 8.1. Reconstruction of Trusty's Hill as it may have appeared c. AD 600. © DGNHAS/GUARD Archaeology Ltd

carvings located outside Pictland were found near Edinburgh Castle Rock; another site attested by archaeological and historical evidence to be a royal stronghold of the sixth–early seventh centuries. Close comparisons can also now be drawn with the early sixth century royal site at Rhynie in the heart of what was once Pictland. The 2012 excavation at Trusty's Hill sought to reveal the archaeological context for the Pictish style carvings. They succeeded in showing that the site was very likely a royal stronghold and place of inauguration of the local Britons of Galloway.

Indeed, despite larger excavations from a cluster of contemporary secular and ecclesiastical sites such as Whithorn, the Mote of Mark, Hoddum, and Lockerbie, Trusty's Hill is the only site in Dumfries and Galloway where there is evidence of royal inauguration. The royal household at Trusty's Hill was at the apex of a complex hierarchical settlement pattern that may well have extended north into Ayrshire and east into Dumfriesshire and Cumbria. But the core appears to be central Galloway, where the archaeological evidence for high status settlement is unmatched anywhere else in northern Britain during the sixth and early seventh centuries. This archaeological evidence seemingly corroborates the literary and historical evidence for Rheged, a kingdom that was pre-eminent

in northern Britain in the later sixth century but which faded into obscurity through the course of the seventh century. The deliberate and spectacular destruction of Trusty's Hill and the Mote of Mark in the seventh century, which can also be surmised for a number of similar but unexcavated sites in central Galloway, is a visceral reminder that the demise of this kingdom in the early seventh century came with sword and flame. It is likely that the nascent kingdom of Northumbria was behind this violent overthrow.

Rheged is probably the most elusive of all the sixth century kingdoms of northern Britain. Nevertheless it contributed a rich source of early medieval poetry by Taliesin. He extolled the martial prowess of its king, Urien, and his sons, and provided witness to their perceived dominance over the neighbouring kingdoms of the north. This is the same Urien who, according to early medieval Welsh historical records, led an alliance of northern kings against the Angles of Bernicia; an alliance that was broken by Urien's assassination at the instigation of another northern British king. If we accept central Galloway as the heart of Urien's Rheged, we provide a political context to the wealth and complexity of its sixth century secular and ecclesiastical settlement pattern, the attraction of the region to continental merchants, and Galloway's

claim as the cradle of Christianity in Scotland. The archaeological record for the establishment of Christianity in southern Scotland suggests that its elite communities were literate and well connected internationally. This could not have occurred without a powerful secular presence providing land and resources. On the basis of this literary, historical and archaeological evidence, we begin to see the tantalising clues to a vibrant and dynamic culture that is entirely consistent with Rheged and the notion that this was, for a short time in the sixth and early seventh centuries, one of the most powerful and influential kingdoms in northern Britain.

The 2012 Galloway Picts Project, a slightly provocative name chosen to reflect the Pictish carvings at Trusty's Hill and engender interest in the investigation, clarified that the carvings at Trusty's Hill are not a relic of the semi-mythical 'Galloway Picts'. This concept, which was never more than a much later medieval monastic moniker for Galloway's people, has long since been debunked. Rather, the archaeological evidence recovered during the Galloway Picts project has instead established a coherent early medieval British context within Galloway for the inscribed Pictish symbols at Trusty's Hill.

There are still questions which future work at

Trusty's Hill may one day answer. What types of high status metalwork was being crafted and how? What were its influences, and indeed did this workshop influence others elsewhere? Are there further imports at the site? Was this an import centre? What did the structures on the summit of the hill look like? Is there further evidence for the lives of its household either within the site or within the surrounding area? Is there further evidence that can more closely define the date of the carvings within the context of Trusty's Hill's principal occupation? Finally, if Trusty's Hill and the Mote of Mark show evidence for the arrested development of an early medieval British kingdom, do other sites in the region offer further corroboration?

The 2012 excavations show that Trusty's Hill was likely the royal seat of Rheged, a kingdom that had central Galloway as its heartland. This was a place of religious, cultural and political innovation whose contribution to culture in northern Britain has perhaps not been given due recognition. Yet the influence of Rheged, with Trusty's Hill at its secular heart, Whithorn as its religious centre, Taliesin its poetic master and Urien its most famous king, has nevertheless rippled through the history and literature of Scotland and beyond.

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Appendix E: *Iron Age Settlement Patterns in Galloway*

TRANSACTIONS
of the
DUMFRIESSHIRE AND GALLOWAY
NATURAL HISTORY
and
ANTIQUARIAN SOCIETY
FOUNDED 20 NOVEMBER 1862

THIRD SERIES VOLUME 89
LXXXIX

DEDICATED TO THE MEMORY OF JANE BRANN (1958–2014)
and
MARION STEWART MBE (1942–2015)

Editors:
ELAINE KENNEDY
JAMES FOSTER

ISSN 0141-1292

2015
DUMFRIES

Published by the Council of the Society

IRON AGE SETTLEMENT PATTERNS IN GALLOWAY

Ronan Toolis¹

Iron Age Galloway is a bit of a conundrum, difficult to clearly differentiate from the Iron Age characteristics of other regions of Scotland but often treated as somewhat distinct nonetheless. The following paper attempts to make sense of the Iron Age settlement patterns of this region and examine if these are significantly distinguishable from those apparent across other regions of Scotland.

If one were to attempt to characterise Iron Age settlements in Galloway, the region's promontory forts, crannogs and duns are perhaps good places to start since these are its most obviously distinctive site types. These site types have led to affinities being drawn with Atlantic Scotland, albeit with caveats (Cunliffe 1983, 86 & 97; Cavers 2008, 16–23) and on the other hand, contrasts with south-east Scotland, if not Dumfriesshire as well (Piggott 1966, 4–5; Feachem 1966, 76; Truckell 1984, 200; Harding 2004, 186). Indeed, by amalgamating and refining the distribution patterns of differing site types from previous attempts (Cowley 2000, 168–174), a visibly different pattern of settlement between Galloway and Dumfriesshire is apparent (Figure 1).

However, many of the Iron Age settlement patterns in Galloway, such as the marked distribution of promontory forts along its coast, must be treated with caution when attempting to draw out a distinctive Iron Age culture for the region. There is such enormous variety between the promontory forts along the north Solway Coast that these cannot be treated as a homogenous type of site distinct from inland settlements (Toolis 2003, 69). The distribution of stone-walled promontory forts, for example, adheres to the same distribution of inland stone-walled settlements in Galloway, with concentrations in the west Machars and Central Stewartry areas (Cowley 2000, 172; Toolis 2003, 69). Contrary to their epithet, hardly any promontory forts occupy strongly defensive locations or have immediate access to the sea (Toolis 2003, 61–69). Nor have the few excavations of Galloway promontory forts yielded especially illuminating results, either revealing undated ramparts (Strachan 2000) or fragmentary remains dating to the late first millennium BC or early first millennium AD but heavily truncated by later activity (Scott-Elliot 1964, 118–123; Ewart 1985, 12–14). Only at Carghidown did excavations reveal something of the nature of occupation of a Galloway coastal promontory fort around the turn of the first millennia BC/AD, allowing comparisons to be readily drawn between its architecture and material culture with other Iron Age sites in the region, though what was revealed — a sporadically occupied refuge — was probably not a typical settlement that can be uniformly replicated either along the Galloway Coast or across inland districts (Toolis 2007, 310).

Because promontory forts are perhaps easier to define from their topography than the bulk of settlements and forts in Galloway, this may explain why they have been previously

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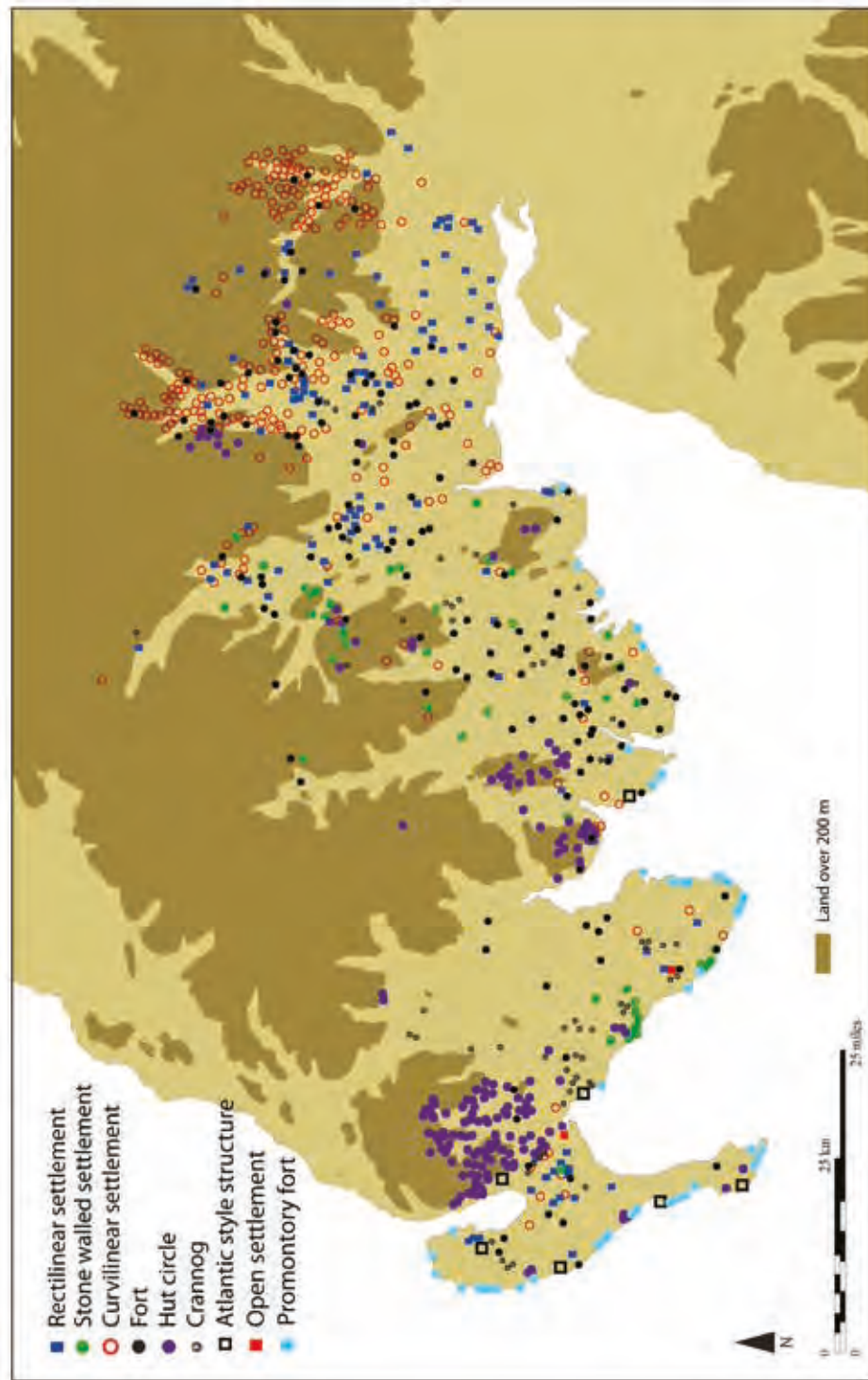


Figure 1. Distribution of Iron Age Settlements across Dumfries and Galloway.

seized upon as a distinguishable type of Iron Age settlement in the region (Feachem 1966, 76). However, as there are no coastal promontories east of the Nith, it should not be surprising that there are no coastal promontory forts there either (Cressey and Toolis 1997; Toolis 2003, 38). Nor is there any evidence that promontory forts had any meaningful relationship to maritime activity. The promontory forts of Galloway *as a group* do not reflect cultural conditions; rather they reflect environmental conditions, specifically the topography of the region.

The same observation applies to the distribution of crannogs, again another type of site often attributed as characterising Iron Age settlement in Galloway in some way (Munro 1882, 248; Piggott 1966, 11; Hanson and Maxwell 1983, 10; Cavers 2008, 19). Crannogs are found widely distributed across Scotland, including east of the Nith and in the Borders too (Morrison 1985, 10; Dixon 2004, 10). There are simply more lochs, or former lochs, in Galloway and therefore more crannogs. Because these crannogs had not been built on or ploughed out, they survived as visible remains to be recorded, especially during the draining of lochs for agricultural improvements in the nineteenth century (Stuart 1866; Munro 1882). Indeed, since drainage of lochs in south-west Scotland during the mid-nineteenth century lagged behind drainage of lochs across eastern Scotland, it coincided with new antiquarian interest in lake dwellings at this specific time, inspired by discoveries in Switzerland, and thus resulted in a bias in the distribution of recorded crannogs that has only recently been recognised (Stratigos 2015). So again, another Iron Age attribute of Galloway, the concentration of crannogs in the region, perhaps owes more to environmental and visibility factors than inherent cultural aspects, though there is a caveat to this in that while the distribution of crannogs may not differentiate Galloway from the rest of Scotland, there are no crannogs south of the Solway despite the preponderance of lakes in Cumbria (Dixon 2004, 26).

Crannogs are normally understood as single households (Piggott 1955, 141; Crone 2000, 64–66), but like promontory forts, not all ‘crannogs’ are the same, as demonstrated at the Black Loch of Myrton where a loch-side village was instead encountered (Cavers and Crone 2013, 61). Nevertheless, the majority of crannogs were probably single households, and one might question if they are significantly different in the nature of their occupation, or their place in local settlement hierarchies (Crone 2000, 64–66 & 165–166), to other forms of single household settlements. These are plentifully evident across Galloway in a variety of small stone-walled settlements, brochs and duns that reflect wider trends of Scottish architectural forms but often with a local twist (Barbour 1907; Curle 1912; Scott-Elliot *et. al.* 1966; Yates 1983). While some might also consider this as evidence that Galloway perhaps shares more affinity with an Atlantic zone of Scotland (Cavers 2008, 16–17), the region does not have significantly more brochs or other Atlantic style structures than the rest of central and southern Scotland. While there are certainly no brochs in Galloway of the same size as Edin’s Hall in Berwickshire or the Leckie in Stirlingshire, or potentially associated with a larger multiple household settlement as at Edin’s Hall and Torwoodlee in the Scottish Borders, it has not yet been demonstrated that the occupation of brochs in Galloway was significantly different to that of most brochs in central or southern Scotland (*contra* Cavers 2008, 16–17), which appear to be predominantly single household settlements of the early centuries AD (Macinnes 1984, 236; Dunwell 1999, 351).

The only excavated broch in Galloway, at Teroy to the north-west of Stranraer, certainly appears to adhere to this trend, having yielded a sherd of Roman pottery (Fraser Hunter *pers. comm.*) from only a limited excavation of its interior (Curle 1912, 185). Teroy does not appear to be significantly different in form, internal floor area or topographic location to the brochs at Fairyknowe in Stirlingshire, Torwood near Falkirk, and Bowcastle in the Scottish Borders, or indeed many other brochs in much of the rest of Scotland. The brochs at Doon Castle and Stairhaven in Galloway, might appear a bit more idiosyncratic, the former with a double entrance, the latter with a double staircase and a comparatively diminutive internal floor area, and both in markedly inconspicuous locations overlooked by steeply rising adjacent ground. However, in most of these aspects these structures are comparable to other Iron Age settlements in Galloway (Toolis 2007, 304–305; Haggarty and Haggarty 1983, 38–39 and Figure 10) as well as being architecturally analogous with brochs elsewhere in Atlantic Scotland, particularly Argyll (Cavers 2008, 16). There may well be other aspects of Iron Age settlement in Galloway that find equivalence with other regions of Atlantic Scotland, such as the scattered distribution of small stone-walled settlements across Galloway with that of the duns of north-west Scotland and again particularly Argyll (Cavers 2008, 18). However, if the Galloway brochs find ready comparison with brochs elsewhere in Scotland, it should be noted that, like crannogs, there are no brochs south of the Border. So while there are shared settlement forms across southern Scotland and northern England, such as rectilinear settlements (Cowley 2000, 173), there are distinctive differences too, which may be more significant than the inter-regional variations within Scotland itself.

One example of the supposed inter-regional variations is the comparison drawn between the relatively small size of settlements in Galloway and those settlements to the east of the Nith and elsewhere in south-east Scotland, which has been understood to correspond to a less developed, more socially fractured society in Galloway, perhaps comprising smaller social units (Piggott 1955, 149; Hanson and Maxwell 1983, 10). However, one might question whether the size difference between the settlements of Galloway and those east of the Nith is that significant. Many of the excavated settlements in Annandale appear to have been single household settlements too, such as Hayknowes and Uppercleuch (Gregory 2001, 31; Terry 1993, 62a), just with larger and perhaps better defined surrounding yards for the management of livestock. Even where enclosed settlements in Dumfriesshire might first appear to have been multiple household settlements, as at Boonies, excavation demonstrated that for most of its occupation it was a single household settlement, only latterly developing into several houses, but even then representing not significantly larger actual floor-space (Jobey 1975, 138).

There were, of course, multiple household settlements in Dumfriesshire, such as Woodend, Castle O'er and Bailiehill (Banks 2000, 231; RCAHMS 1997, 80–81), but multiple household settlements are evident in Galloway too. Excavation of only a very small part of the interior of Rispain Camp near Whithorn revealed a large round house, adjacent to another, only partially revealed but of comparable diameter (Haggarty and Haggarty 1983, 38–39 and Figures 3 and 10). The clear layout of these adjacent round houses, with no superimposition on either structure or each of their associated features, along with the apparent destruction by fire of both roundhouses (Haggarty and Haggarty 1983, 38–41) suggests that these two buildings were contemporary. Whether Rispain

Camp contained more houses is for further excavation to determine, but the excavators noted that the interior of the enclosure could accommodate eight such buildings (Haggarty and Haggarty 1983, 42). That this site appears to be a multiple household settlement could reflect a significant cultural distinction from the single household settlements in the region. Permanently occupied multiple household settlements require and thus reflect different cultural practices for social cohesion amongst their inhabitants from those of single households (Rathbone 2013) as well as creating opportunities for increased social interaction (Roberts 1996, 36). One of these cultural distinctions may be manifested in the unusual find of bread wheat from Rispaan Camp, which, so far, is unique amongst Iron Age settlements in Galloway and somewhat at odds with the dearth of Iron Age rotary querns in Wigtownshire (Hunter *et al.* forthcoming). It may be that the larger population of a multiple household settlement such as Rispaan Camp developed a different agricultural economy in order to sustain occupation of a proportionately smaller parcel of land. As already noted above, the ongoing excavations at Black Loch of Myrton have also revealed an apparent multiple household settlement (Cavers and Crone 2013, 61) while recent excavations at Dunragit exposed an unenclosed settlement, where some specialisation of structures for metalworking was evident (Arabaolaza *et al.* 2015, 126). Given that all six of the roundhouses examined at Dunragit appeared to co-exist within the same stratified sequence of wind-blown sand and that they did not intercut each other, it seems likely that this was a multiple household settlement rather than a consecutive sequence of single households (Arabaolaza *et al.* 2015, 116–121). Furthermore, sherds of native pottery from a floor deposit within one of the roundhouses at Dunragit (Arabaolaza *et al.* 2015, 120), is perhaps a manifestation of cultural practices distinct from the aceramic Iron Age culture evident elsewhere in Galloway. The probable dates of occupation for these settlements is widely divergent though, with radiocarbon dating and dendrochronology indicating that Black Loch of Myrton was occupied around the fifth century BC (Jacobsson 2015) while Dunragit appears, at least from initial assessment of the finds, to date to around the early centuries AD (Arabaolaza *et al.* 2015, 118), which may be more or less contemporary with the occupation of Rispaan Camp (Haggarty and Haggarty 1983, 40). In essence, however, size differences between single household settlements in Galloway and those east of the Nith are perhaps less significant than the difference between a settlement pattern solely comprising individual farmsteads to that comprising villages and farmsteads, because the two types of settlement pattern entail different cultural practices and economies and imply settlement hierarchies too. Crucially, the settlement patterns in Galloway and Dumfriesshire do not appear to significantly differ in this aspect.

It is indeed possible that the occupants of the multiple household settlement at Rispaan Camp became significant participants in the control and exploitation of local agricultural and mineral resources apparent in the southern Machars around the turn of the first millennium and which may have extended into the early centuries AD (Haggarty and Haggarty 1983, 43; Hunter 1994, 53–55; Toolis 2007, 305–307). The exploitation of lead sources in the southern uplands is certainly apparent in both the pre-Roman Iron Age and the post-Roman period (Pashley *et al.* 2007, 283–284; Pashley and Evans forthcoming). It may be that a local hierarchical control and redistribution of such mineral as well as agricultural resources was linked to the development of a Roman period settlement at Whithorn during the early centuries AD (Dickinson *et al.* 1997, 297). This might in turn address why an

air of pseudo-*Romanitas* amongst native Celtic Britons was apparent here during the fifth century AD, as suggested by the secular literate origins of the Latinus Stone (Forsyth 2005, 117; Forsyth 2009, 33 & 36).

One might also draw attention to the trend apparent across southern and central Scotland for a select number of enclosed single households, comprising large timber roundhouses, crannogs and brochs, to achieve pre-eminence during the first and second centuries AD (Macinnes 1984, 241–244; Halliday 2002, 104). There seems no reason to exclude Galloway from this trend, given the comparable distribution of Atlantic-style structures, crannogs and small forts or duns datable to this same period (Cavers 2008, 14–19 & 24; Henderson 1998, 230; Figure 1) and the presence of Roman objects, predominantly high status tableware, within several such native settlements, such as Castle Loch Island, Dowalton Loch Crannog 3, McCulloch's Castle and Teroy Broch (Wilson 2001, 100–102; Scott-Elliot 1964, 123; Fraser Hunter *pers. comm.*). The strong correlation between the types of samian vessels in native sites and Roman military sites in Scotland suggests that the selective distribution of fine tableware and other prestigious Roman goods to some native households but not others during the Roman occupation of southern Scotland, may have owed more to diplomatic and political motives than purely commercial intentions (Macinnes 1984, 243–244; Dunwell 1999, 352–353; Banks 2000, 277–278; Ingemark 2014, 237). It also suggests that the selected adoption of Roman customs, enacted within a native Iron Age cultural context, was used by those favoured households, in Galloway as elsewhere in southern Scotland, to enhance influence amongst their own clients and provide social barriers to others (Ingemark 2014, 237–239).

However, there is as yet an insufficient body of evidence, particularly dating evidence, to actually demonstrate settlement hierarchies during the Iron Age in Galloway. This is in marked contrast to the complex secular and ecclesiastical site hierarchies evident across south-west Scotland in the sixth and early seventh centuries AD, due largely to the relative preponderance of investigated sites, such as Whithorn, Mote of Mark, Trusty's Hill, Tynron Doon, Kirkmadrine and Ardwall Island, that can be dated to this period (Toolis and Bowles 2013, 47; Toolis and Bowles forthcoming). Notwithstanding the difficulties in identifying comparable settlement hierarchies in Galloway during the preceding centuries, the sixth-seventh centuries AD is a period, nevertheless, that relates heavily to the late Iron Age (Harding 2004, 209–211). It is therefore perhaps worth examining the potential Iron Age roots of the complex early medieval settlement hierarchy in Galloway as a way of elucidating the potential development of Iron Age settlement hierarchies.

The form and layout of the sixth-century nucleated fort at Trusty's Hill, for instance, may have developed from, or were at least related to, a group of 'courtyard forts', including Nethertown of Almorness, Dungarry and Suie Hill, in the southern Stewartry district of Galloway (Truckell 1963, 94–95). Nor are these the only forts in the Stewartry district of Galloway where comparisons have been made with Trusty's Hill (Feachem 1977, 129–131). A few miles to the east and south-east lie the hillforts of Arden and Barn Heugh, which both comprise oval summits enclosed by dry-stone ramparts accompanied by lower-lying outworks (Coles 1893, 133 & 145). There are also a number of vitrified forts in the Stewartry that share strong resemblances with Trusty's Hill (Feachem 1977, 129–130). Richard Feachem identified eight vitrified forts from amongst a group of 26 sub-rectangular forts distributed across Galloway (1966, 76), though only six, including

Trusty's Hill, were identified by Euan MacKie, along with a further two in Dumfriesshire (1976, 233–235). While timber-laced forts, or vitrified forts as they are often recognised in the archaeological record, are not culturally or chronologically distinct, being distributed widely across Europe from as early as the eighth century BC (MacKie 1976, 209–210; Ralston 2006, 143), they are not so common in Dumfries and Galloway. Indeed, most of the other vitrified forts in Dumfries and Galloway outwith the Stewartry, such as Doon of May in Wigtownshire and Mullach and Kemp's Castle in Nithsdale, are all very dissimilar in form to the Stewartry vitrified forts and each other (RCAHMS, 1912, 76; RCAHMS 1920, 122–123 & 193). Nevertheless this distribution across south-west Scotland was identified as one of three major groups in Scotland, geographically separate from the others in northern and central Scotland (MacKie 1976, 222 & 444). It is perhaps significant that the four other vitrified forts within the Stewartry district of Galloway — Edgarton Mote, Castlegower, Mochrum Fell and the Mote of Mark — in closest proximity to Trusty's Hill, appear to be very similar morphologically or chronologically (RCAHMS 1914, 35–36 & 60–61; Laing & Longley 2006, 2). The Mote of Mark is the only one of the Galloway vitrified forts, other than Trusty's Hill, to have been excavated, yielding evidence again for occupation in the sixth and early seventh century (Laing & Longley 2006, 24). The only other excavated vitrified fort in the region is Castle O'er in Eskdale in East Dumfriesshire, which interestingly resembles the layout of the courtyard forts of Suie Hill and Dungarry, albeit as a much larger settlement (RCAHMS 1997, 80). Castle O'er appears to have been constructed in the third or fourth centuries AD before being vitrified and destroyed at some point probably before the end of the fifth century (Roger Mercer, *pers. comm.*). Whether any of the other unexcavated vitrified or nucleated forts are contemporary with or precede Trusty's Hill remains to be discovered, but it is possible that like the spate of hillforts that emerged in Strathdon in Aberdeenshire between c. AD 400 and AD 650 (Cook 2011, 216–218), a comparable pattern of high status fortified settlements emerged in Galloway, and particularly the Stewartry district of Galloway, around this time too.

If settlement hierarchies earlier in the Iron Age are difficult to recognise, however, so too are differential regional distributions. Distinctions have been drawn between various sub-groups of settlements either side of the Nith (Cowley 2000, 170–174), but it is difficult to distinguish the morphology of settlements from small hillforts (Harding 2004, 59). Leaving aside rather subjective attributions of 'defensiveness', one might question if the curvilinear settlements, ubiquitous in Dumfriesshire but apparently missing in Galloway, are not, due to local topography, simply masquerading as forts and stone-walled settlements in the west of the region (Figure 1). As numerous excavations across Scotland have demonstrated, at Broxmouth (Armit and Mackenzie 2013, 18–19), Hownam (Piggott 1948, 198–200) and Carghidown (Toolis 2007, 272) for instance, many apparently enclosed sites were unenclosed for large periods of their occupation. Defining Iron Age sites solely by how they were enclosed at some point in time should therefore be treated with caution, especially since later prehistoric settlement architecture across Galloway, as in the rest of Scotland, spans the centuries from the Late Bronze Age (Cook 2006, 17; Ronan 2005, 66) to the early medieval period (Toolis and Bowles 2013, 42). As the excavations at Trusty's Hill demonstrate, even a site that can be clearly classed in terms of status and date, in this case a nucleated fort of the sixth and early seventh centuries AD, was almost certainly quite a different form of settlement in the fourth century BC when the earliest occupation of this site is evident (Toolis and Bowles forthcoming). Excavation of some of the other nucleated

forts in the region may well reveal similar patterns of occupation and re-occupation over an extensive span of time.

Compounding the lack of chronological focus, later prehistoric site distribution patterns reflect only what is visible and recorded (Cowley 2000, 167–168; Halliday 2006, 11–12). This is perhaps most clearly demonstrated by the distribution of hut circles in Galloway (Figure 1), which almost exclusively follows RCAHMS surveys of unimproved ground (Cowley 2000, 169). So one must also take into account what is not apparent, especially in those districts such as the southern Machars where a dearth of recorded cropmarks in comparison with the east Rhins may merely reflect the predominance of pasture and poorly drained soils which inhibit detection (Cowley *pers. comm.*), resulting in a comparative scarcity of aerial survey results. The apparent preference in Iron Age Wigtownshire for the occupation of either lochs, high ground or the coastal edge (Toolis 2007, Illus. 25) reflects the survival and visibility of sites in the agricultural margins of the modern landscape.

It is questionable, then, whether Iron Age settlement patterns in Galloway were truly different from those in Dumfriesshire or indeed the rest of southern Scotland. Certainly, later prehistoric Galloway lacks the large enclosure crowning a *regional* hilltop landmark as is evident elsewhere in southern Scotland. Its three largest hillforts, Dinguile, The Moyle and Barstobric Hill, all concentrated in the central Stewartry district, only range between 2.2 and 3.6 ha. These are significantly smaller than the 16 ha enclosed at both Traprain Law in East Lothian and Eildon Hill North in the Scottish Borders, or the 7 ha enclosed at Burnswark in Dumfriesshire (Hogg 1979, 131–133; Feachem 1977, 129–130; Armit and Mackenzie 2013, 480; Rideout *et al.* 1992, 141; Jobey 1978, 57). None of the three largest Galloway hillforts occupy what might be considered a regional landmark either, but then Galloway does not have a regional hilltop landmark comparable to Traprain Law, the Eildon Hills or Burnswark. Galloway's large regional landmark is not a hill but a mull, and which was recognizably so at least as early as the early second century AD given the reference to it in Ptolemy's Geography (Ordnance Survey 1978, 15). The ramparts cutting across the Mull of Galloway enclose 40 ha, which would make this the largest of all later prehistoric enclosed sites in Scotland. Though dating evidence has not been recovered from the limited excavations here, it is difficult to imagine the morphology of its closely spaced ramparts to be anything but later prehistoric in date (Strachan 2000). So while the bulk of sites in Galloway lie below 0.7 ha with only a handful above 1 ha and none, apart from the Mull of Galloway, above 4 ha (Hogg 1979, 126–134), this is not so different from Dumfriesshire or the eastern part of East Lothian, for instance, where the bulk of sites lie below 0.8 ha, again with only a handful of larger sites (Hogg 1979, 134–139; Reader and Armit 2013, 483). Although large, complex and *well-preserved* sites, such as Castle O'er, are difficult to find comparisons with in Galloway, this may be more because Galloway has not been as intensively surveyed as East Dumfriesshire, East Lothian or the Borders, than that these types of sites are actually absent. For with sites such as Cairn Pat, Fell of Barhullion and Isle Head, as well as Dinguile, the Moyle and Barstobric Hill, there are large, potentially complex enclosed settlements in Galloway. While large settlements or villages may not have been typical in Galloway, few large settlements and none of the larger hillforts west of the Nith have actually been excavated.

Furthermore, while contrasts can be drawn between Galloway and south-east Scotland in relation to the interior surfaces of enclosed settlements, where many of the south-eastern

sites are apparently packed with visible stances of timber roundhouses but sites west of the Nith are not, the factors of survival and visibility cannot be easily downplayed since agriculture, particularly cattle, whether ancient or modern, has demonstrably impacted the interior of enclosed settlements (Armit and Mackenzie 2013, 21), including even some of the most marginal places of Galloway (Toolis 2003, 71–72). Put crudely, such contrasts in visible surface remains may be due to the predominance of cattle-raising in Galloway and sheep farming in the Borders, which each impact archaeological earthworks and surfaces to different degrees.

There are other quirks of Iron Age settlement patterns in south-east Scotland, such as the apparent pairing of sites (Harding 2004, 63) that can be matched in both Dumfriesshire and Galloway (RCAHMS 1997, 137–141; Toolis 2003, 49). However, it would be wrong to say that there are no differences between the settlement patterns or architecture of Lothian, the Borders and Dumfries and Galloway. South-west Scotland has fewer of the ring-ditch roundhouses of the early first millennium BC, the distribution of which extends up the east coast north of the Forth (Armit and Ralston 1997, 175–176). A distinctive pattern of later prehistoric settlement enclosure, comprising stone-walled roundhouses located at the rear of a cluster of small enclosed yards, is distributed across south-east Scotland and north-east England (Armit and Ralston 1997, 179). This distribution appears to extend into Cumbria, as demonstrated by sites such as Ewe Close and Crosby Garrett, but not as far west as Dumfriesshire or Galloway.

Differences in material culture have also been drawn between south-west, north-west and south-east Scotland (Hunter 1997, 111; Banks 2002, 31), though it is difficult to reconcile these with matching settlement patterns. As noted above, most of the apparent concentrations of site types in Wigtownshire (Figure 1), such as crannogs and promontory forts, can be attributed to environmental factors, or in the case of hut circles visibility and surveying. Only the cluster of Atlantic-style brochs and duns around the Rhins might distinguish the westernmost part of Galloway from the rest of the region but even with this type of site there is an outlier in the Stewartry, Castle Haven, albeit that this latter site may well be early medieval rather than Iron Age (Alcock *et al.* 1989, 209; Cessford 1994, 73–74; Alcock 2003, 187; Laing and Longley 2006, 165). Though brochs and duns are clearly much thicker on the ground in northern and western Scotland, hillforts are nevertheless present in these regions too (Armit and Ralston 1997, Figure 10.5). The case is that, like Wigtownshire, archaeological excavation of such large multiple household settlements has simply not yet been undertaken, with research in these regions instead focussed on prominent single household settlement types (Armit and Ralston 1997, 183–184), which has perhaps led to a bias in the perception of the entire settlement pattern of these regions.

Where artefacts are recovered from Iron Age settlements in Galloway, they tend to be rather ordinary, mundane items such as worked stone tools, yet this material poverty is hard to square with the hoard of utilitarian metalwork found in the Carlingwark Cauldron, or exquisitely crafted objects such as the Balmaclellan Mirror and Torrs Pony Cap. Indeed, the Carlingwark Cauldron Hoard is one of three located across southern Scotland (Piggott 1955, 2–5) and intrinsically demonstrates shared cultural traits between at least the Stewartry district of Galloway and south-east Scotland. The markedly different quality and complexity of manufacture apparent between the bladed tools from the Carlingwark and Blackburn hoards and Traprain Law in comparison with those from Newstead Roman Fort

indicates that the origins of these hoards lay amongst the native communities of southern Scotland (Hunter 1997, 117).

At Carghidown, only a very thin layer of occupation debris and a very modest assemblage of artefacts were recovered (Toolis 2007, 282–291). But this reflected the fact that the previous phases of occupation had been swept clean. However, the sweeping of floors is apparent not only in other sites in Galloway such as Moss Raploch (Condry and Ansell 1978, 111), but also at Uppercleuch, Woodend and Burnswark in Dumfriesshire (Terry 1993, 77; Duncan 2000, 257; Jobey 1978, 78), at Sollas and Cnip in the Western Isles (Armit 1996, 145), at Scalloway in Shetland (Sharples and Parker Pearson 1997, 258), at Broxmouth in East Lothian (Armit and McKenzie 2013, 493) and is implicit in sites further afield (Mytum 1989, 73–7). This cannot therefore account for the material poverty of Iron Age settlements in Galloway in comparison with assemblages from settlements in other parts of Scotland, and it may be that Iron Age communities in Galloway perhaps utilised perishable organic materials, or recycled or disposed of their material wealth to a more significant degree than communities elsewhere in Scotland. However, the archaeological context of materially wealthy settlements also requires examination. Excavations elsewhere in central and southern Scotland, such as Fairy Knowe Broch near Stirling, yielded a considerable assemblage of in-situ artefacts deriving from the occupation of this site. But this derived from the final phase of an Iron Age house in the very process of being destroyed by fire and abandoned thereafter (Hunter 1998, 393–401). Similarly impressive domestic assemblages have been recovered from Leckie Broch also in Stirlingshire and Torwoodlee in the Scottish Borders, but again these houses had also suffered catastrophic destruction (MacKie 1982, 62; Piggott 1953, 114). Unfortunately, other than Carghidown (Toolis 2007, 304), no such Iron Age house of arrested development, and certainly no comparable prominent single household settlement, has so far been excavated in Galloway. But as the 2012 re-excavation of Trusty's Hill demonstrated, where a 1960 excavation encountered an apparently materially impoverished site (Thomas 1961, 63), a combination of improved techniques and resources and a little luck revealed a very much more materially wealthy settlement (Toolis and Bowles forthcoming). So perhaps the targeting of some previously partially excavated sites, such as Teroy Broch or Castle Haven, may produce results that address the apparent material poverty of Galloway settlements.

Such further excavations will significantly enhance our understanding of Iron Age settlement in Galloway, not just through clarifying material culture, but by establishing a more coherent chronology for settlement patterns. A growing number of radiocarbon dates have been extracted from crannogs in Dumfries and Galloway (Henderson 1998, 230; Henderson *et al.* 2006, 30) and while work has been undertaken to integrate wetland and dryland sites such as at Culds Loch (Cavers and Crone forthcoming) and Black Loch of Myrton (Cavers and Crone 2013, 61), a much wider range of dryland sites require radiocarbon dating too. Given that previous radiocarbon dating of many dryland sites, such as McNaughton's Fort, Rispaun Camp and Cruggleton Castle, was extracted from mixed assemblages of charcoal including long-lived species such as oak (Scott-Elliott 1966, 75; Haggarty and Haggarty 1983, 40; Ewart 1985, 14) which distorts the results, further radiocarbon dating of single entity samples of appropriate short-lived species from the assemblages of these sites could significantly refine the corpus of reliably dated settlements in the region. The cumulative impact of acquiring radiocarbon dates from a range of sites,

such as the recently acquired 44 cal BC – 85 cal AD date from the base of the ditch of Little Wood Hill enclosure near Threave (Derek Alexander *pers. comm.*), is probably one of the most cost-effective ways of beginning to understand Iron Age settlement patterns in Galloway. In Aberdeenshire, keyhole excavations of enclosed settlements have supplemented large-scale area excavations in yielding a suite of reliable radiocarbon dates that show how settlement across the later prehistoric landscape was not homogenous or evenly distributed (Cook and Dunbar 2008; Cook 2011). A similar approach to Iron Age sites in Galloway may also reveal patterns of contraction and expansion of differing forms of settlement across the landscape.

For only by excavating a wider range of Iron Age sites in Galloway will more evidence be recovered that demonstrates what made each site unique and what made each site part of wider settlement patterns. But to make sense of site patterns in Iron Age Galloway, a level of sustained research focused on particular areas is probably required, as has been undertaken in the eastern part of East Lothian for instance (Haselgrove 2009; Armit and Mackenzie 2013), or Strathdon in Aberdeenshire (Cook 2011). Given the clusters of previous work in the Machars, in the East Rhins and the southern Stewartry, these are probably the districts of Galloway that future research might be better focussed on, building on research already undertaken and where some measure of local context can therefore be applied.

Until such work is undertaken, the problem remains of making sense of Iron Age settlement patterns and settlement hierarchies in Galloway. The closer one looks at the sheer variety of sites, the more ephemeral and tenuous the distinctions seem. Simply because an archaeological site can be described as a ‘type’ of site, does not confer meaning upon it. That is not to say that later prehistoric sites in Galloway lack distinction or variety, but trying to classify unexcavated sites in ever more complex sub-divisions is probably futile; somewhat akin to categorizing Christmas presents before they have been unwrapped. Nevertheless, cultural aspects of Iron Age Galloway can be drawn out from the underlying geographical and environmental characteristics of the settlement pattern.

There are recognisable cultural traits in Iron Age Galloway such as the cleanliness of roundhouse interiors, the deposition of high-status metalwork in wetland locations and the potential development of complex forts from the late Iron Age into the early medieval period. Other recognisable cultural traits in Iron Age Galloway include the varying monumental domestic architecture of the crannogs, brochs and duns scattered across the region, and the correlation between numerous small single-household settlements and fewer large (and presumably multiple-household) settlements. Significantly, these traits do not distinguish Iron Age Galloway from neighbouring regions but instead reflect broad Iron Age cultural practices apparent across the length and breadth of Scotland. While rectilinear settlements are widely spread across Southern Scotland and Northern England and imply cultural similarities, the absence of brochs and crannogs south of the border starkly illustrates distinctive cultural differences too, for such monumental domestic architecture does not reflect environmental factors in the way that coastal promontory forts do, but stems from cultural traits. That the same cultural choices for defining households in Galloway are common across Scotland but appear to be entirely absent in Cumbria (McCarthy 2000, 136–137; McCarthy 2002, 46–47), where there appears to be no environmental reason for an absence of crannogs for instance, suggests that the distinction apparent during the Iron

Age between the regions north and south of the Solway is perhaps more significant than the more superficial inter-regional variations within Scotland, because this distinction may define a clear cultural difference. This difference may be between a much more hierarchical society across Scotland than that in north-eastern England for instance, where but for its northernmost districts no such development of a hierarchical settlement pattern is apparent (Willis 1999, 102). While it is commonly asserted that the present Anglo-Scottish border is purely arbitrary in relation to prehistory (Bevan 1999, 9; Armit 1999, 65), the question nevertheless remains as to why there are no crannogs or brochs to the south of it. Given the origin of the southern brochs within the early centuries AD (Armit and Ralston 1997, 176), it is not difficult to identify the proximity and physical presence of Hadrian's Wall as an inhibition to the construction of brochs further south, but the same cannot be said for crannogs, which originate from the middle of the first millennium BC and continued throughout and beyond the Roman occupation of southern Britain (Henderson 1998, 230). As a line on the map, the border is undoubtedly arbitrary from a prehistoric perspective, but as a zone of land within the island of Britain, Southern Scotland/Northern England has witnessed a series of fluctuating national cultural boundaries, whether the limits of Roman Britain, the erratic boundaries of the north British kingdoms of Rheged, Goddodin and Strathclyde with Anglo-Saxon Northumbria, and of course the medieval kingdoms of Scotland and England. As the overlapping distributions of brochs, crannogs and rectilinear settlements demonstrates, it is entirely plausible that significant national cultural boundaries may have fluctuated across this zone throughout later prehistory too.

A much larger sample of later prehistoric sites in Galloway undoubtedly requires excavation before more meaningful shared patterns can be drawn out and Iron Age cultural traits be more closely identified and understood. But it might also be worth questioning if the regional approach that underpins Iron Age research in Scotland is itself altogether valid and if a much broader perspective is required to make sense of Iron Age settlement patterns. The pervasive regionalism to Iron Age research in Scotland (Armit and Ralston 1997, 170) naturally gravitates to a perspective that takes as given that each region is distinct, and so tends to underplay the similarities of Iron Age cultural traits across Scotland and the distinctions from cultural traits south of the border. It may be that future research does not so much extricate Iron Age culture in Galloway from the rest of Scotland as embed the archaeology of later prehistoric Galloway more fully within the core underlying patterns of settlement, hierarchy and culture in Scotland during this period.

Acknowledgements

The illustration was prepared by Alan Hunter Blair, Fiona Jackson and Gillian McSwan at GUARD Archaeology. The author is grateful to John Atkinson, Richard Tipping, Strat Halliday and Dave Cowley for commenting on earlier drafts, to Fraser Hunter and Derek Alexander for advice on recent findings, and to Jane Murray of the Friends of the Whithorn Trust for the invitation to give a lecture to the *Iron Age in Galloway* Conference in Whithorn on 13 September 2014,² which spurred the preparation of this paper.

2 A review of this conference by Jane Murray, Secretary to The Friends of the Whithorn Trust appeared in *TDGNHAS* 88, 203–5. – Ed.

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